

THE MILLING WORLD

AND

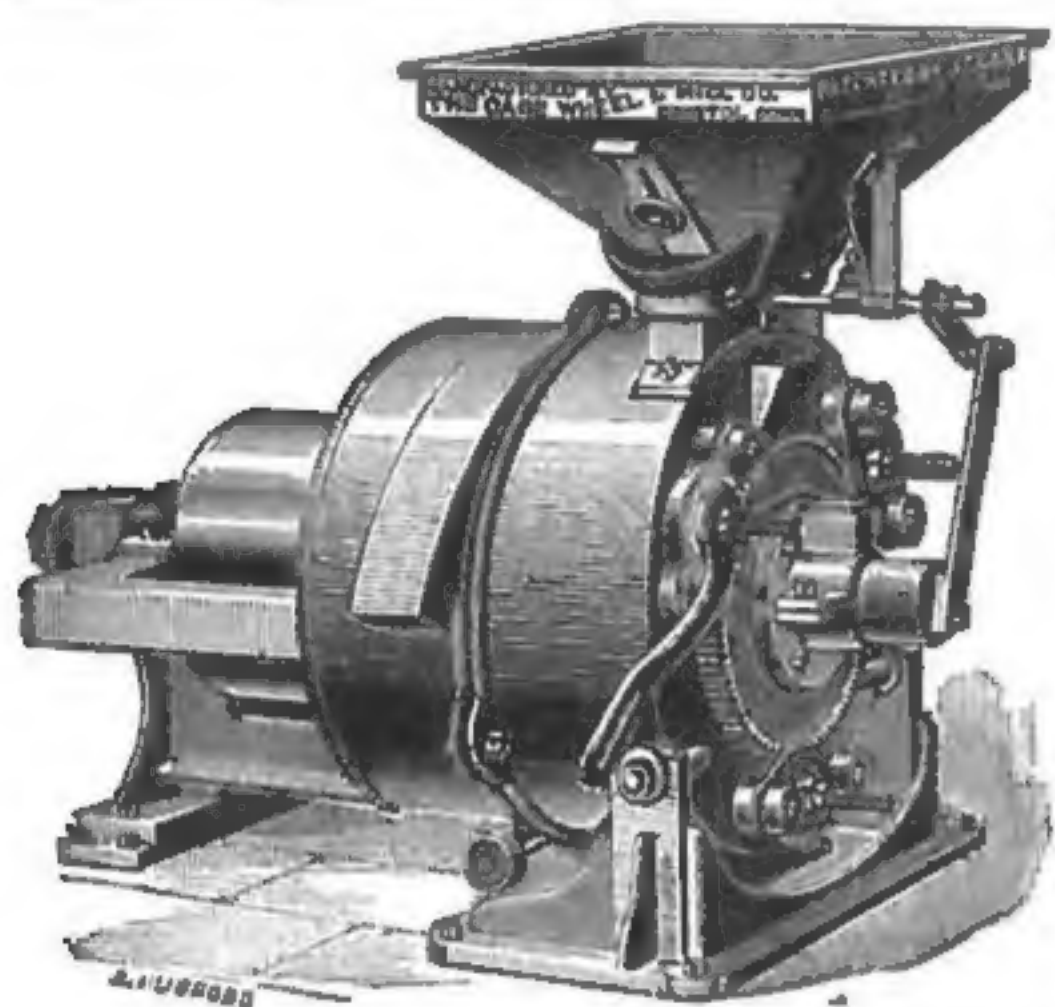
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XXI. No. 8.

BUFFALO, N. Y., OCTOBER 21, 1889.

\$1.50 PER YEAR.



VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS.

(J. T. CASE'S PATENT.)

FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.

"Superior to any mill in use."—Geo. WESTON, Bristol, Conn.

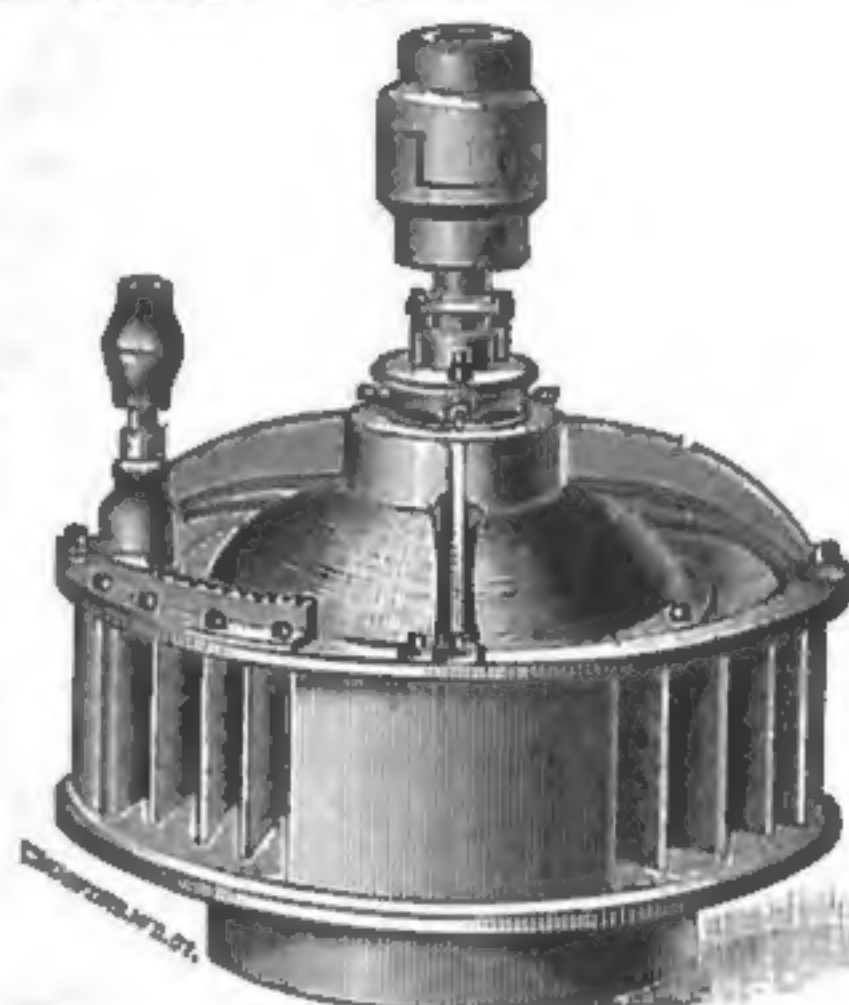
"The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.

"We take pleasure in recommending it."—GARLAND, LINCOLN & Co., Worcester, Mass.

SEND FOR CATALOGUE—ILLUSTRATED AND DESCRIPTIVE.

The Improved National Turbine Water Wheel

The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.



The Case Wheel & Mill Co., Bristol, Conn.

WE BUILD THE MOST EXTENSIVE —LINE OF— Flour AND Corn Meal Milling Machinery in America

SHERIDAN, IND., NOV. 30, 1888.
THE J. B. ALLFREE CO.

GENTS: In reply to your inquiry how we like your system, will say it can't be beat. Your machinery is perfect from top to bottom. We especially favor your Rolls, Purifiers and Flour Dressers; they give no trouble, and are always running to perfection. Our flour sells at good prices, and is equal if not better than that of our competitors. Our percentage of low grade is very small, hardly worthy of notice. Yours very truly,

SHERIDAN MILL & ELEVATOR CO.



BARTON, MD., DEC. 20, 1888.
THE J. B. ALLFREE CO.

DEAR SIR: I have been using your Rolls and system of milling for the last four years, and have found them satisfactory in every particular. Your Rolls are as near perfect as any can be. I am doing splendid work and making splendid flour. Our flour is ahead of any thing in the market. I would cheerfully recommend your machinery and system of milling to our milling fraternity.

Yours respectfully,
J. W. YOUNG.

FLOUR MILLS. CORN MILLS. HOMINY MILLS.

Our machines are constructed of the best material and workmanship that can be procured.

Address for catalogue, etc.,

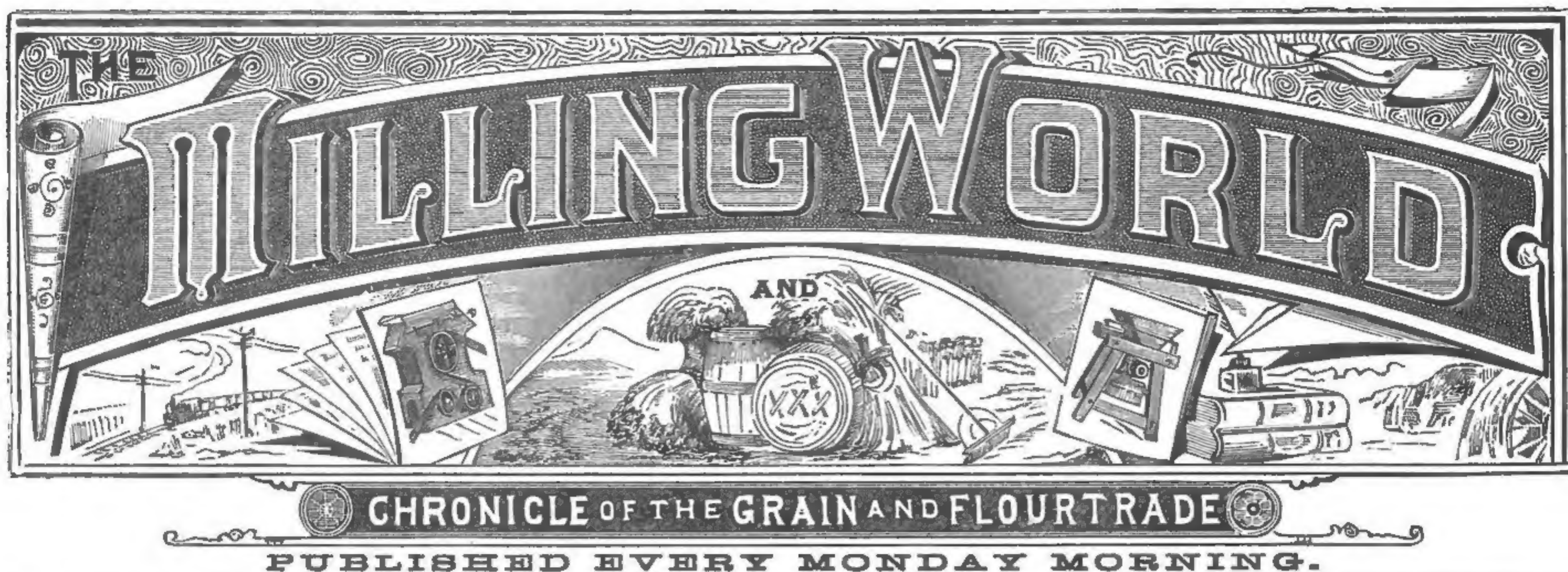
The J. B. Allfree Co., Indianapolis, Ind.

CASE.

CASE MFG. CO., COLUMBUS, O.
GENTLEMEN: If we were to build a hundred mills we
would not permit any other than the "CASE" roll to
enter them. They are the best roll on earth.
Yours truly,
W. C. MANSFIELD & CO.

W. C. MANSFIELD & CO.,
MERCHANT MILLERS,
CLEVELAND, TENN., AUG. 29, 1889.

CASE.



VOL. XXI. No. 8.

BUFFALO, N. Y., OCTOBER 21, 1889.

\$1.50 PER YEAR.

IOWA demagogues are getting in their fine work on the railroads. During the season now closing there have been laid several thousands of miles of new railroad in the United States, but in the state of Iowa, where the legislators, egged on by a singular insanity of public opinion, have tried to make railroad business wholly unprofitable, not one mile of new track has been constructed. The lesson is plain to all persons outside of Iowa, however doubtful it may appear to those who live in that state.

HYGIENIST cranks assert that fine white wheat flour will make the nations using it nations of toothless men and women. They assert that toothache, decayed teeth and false teeth are the direct results of using flour from which the bran, gravel, smut, awns, chaff, fluff, cockles, garlies, mustard, nails and fiber have been removed. It may not be amiss to remind these anti-white-flour propagandists that in ancient tombs the modern searchers find men whose teeth were filled, and whose mouths contain whole sets of false teeth, thus proving that the ancients, who they say "never destroyed their teeth by extracting teeth-forming matter from their grain," contrived to get there all the same. We opine that the white flour is less answerable for the alleged impending general toothlessness of the human race than the alkalis and other execrable chemicals mixed with it in cooking and baking it. Meanwhile, teeth or no teeth, each sundown sees less persons willing to eat bran, and each sun-up sees more persons willing to invite all the horrors of toothlessness by consuming only white-flour foods. Next to harnessing Niagara river, there seems to be nothing more difficult than to induce Americans to eat coarse flour.

CERTAIN esteemed cotemporaries appear to be harmonious in declaring that Statistician Dodge's crop reports are entirely unreliable. Notwithstanding all the variations of the Dodge reports from exactitude, Cotemporaries, you can not deny that they represent more real work of compilation and less guess-work than any other reports sent out. If the Dodge reports are to be discredited or abandoned, then our "statisticians" must rely solely upon guess-work, misrepresentation and unchecked bull and bear gambling reports. Mr. Dodge's reports at least serve to make wholesale lying by the gamblers somewhat dangerous, and for that one thing they are valuable. Statistician Dodge does the best possible under the circumstances, and only the gamblers in crops would profit from the abandonment of the government crop statistical reports. The system should be made more nearly perfect. It should be thoroughly developed so as to include actual area and yield. The area could be announced at the beginning of the season, and the yield should be given after threshing. Between those two points only climatic and crop conditions should be reported, leaving "estimated" yields out of the programme altogether. Then crop statistics by the government bureau would mean something which neither government nor other statistics can mean now.

MILLERS will note that all along the line, just at present, there is a tendency to cry down the quality of the new crop. This is being done, not only in the United States, but also

in Great Britain, France, Germany, Austria-Hungary and Russia. All at once, by general consent, the new wheat is found to be shrunken, shriveled, thin, discolored, light, dirty, low-grade and generally inferior and undesirable. How large a percentage of bear tactics lies at the bottom of this state of affairs? All these reports of inferiority mean that millers, finding it difficult to secure good milling wheat, must be ready to pay higher prices for their grain. Before the millers fall into the trap and go to stocking up at high prices, it would be well for them to discover the source of these reports. If the reports are found to come from farmers and millers, they may be reliable. If they come wholly from dealers and speculators, they may be unreliable. Millers in some states need a memory only a year long to enable them to recall what happened in 1888 and 1889 to certain prominent millers, who bought large stocks of wheat at prices ranging from \$1 to \$1.25 a bushel, which they were forced to unload in flour in competition with flour made from wheat which was bought at prices ranging from \$1 down to 85 cents. Every raid like the present one on winter wheat should be regarded as suspicious. The bulls may be trying to stampede the millers. There seems to be no single condition pointing infallibly to any thing like a lack of good milling wheat, either spring or winter, in the United States this year.

AMERICAN millers and grain-growers, who have recently heard so much about the predicted great competition in the grain trade between the United States and the Argentine Republic, will probably not fear the immediate results of that competition when they learn that the Argentine Republic is so seriously burdened with debt that immigration and development are likely to cease or to be seriously checked. The Argentinians have been booming and borrowing money at a terrific rate. It is now announced that since 1882 the borrowings of the South America republic in Europe, on government and city loans and railways, have amounted to \$593,000,000. In addition to this enormous amount of money borrowed in Europe, the country is flooded with "cedulas," or paper money, of which the national issues amount to \$26,000,000, valued at about \$20,000,000, and the provincial issues amount to about \$41,000,000, valued at \$33,000,000. Thus the total obligations of the republic are not far from \$660,000,000, for a population of less than 5,000,000. These figures mean that the Argentine Republic offers immigrants a heavy indebtedness calling for great sums for interest, heavy taxation, depreciated paper currency, gold at 229, and all the unwholesome features of an over-boomed, inflated, misrepresented country. Inevitably all these things will tend to check the grain-growing and other interests of the country. Besides all these things, the last crop season showed that the Argentine Republic, instead of being safe from climatic irregularities, as the boomers have proclaimed it to be, is really quite as liable as any other grain-growing country to most capricious and ruinous weather conditions. On the whole it looks as though the Argentine boom has passed its climax, and as though the South American wheat-growing competition will not for many years become formidable.

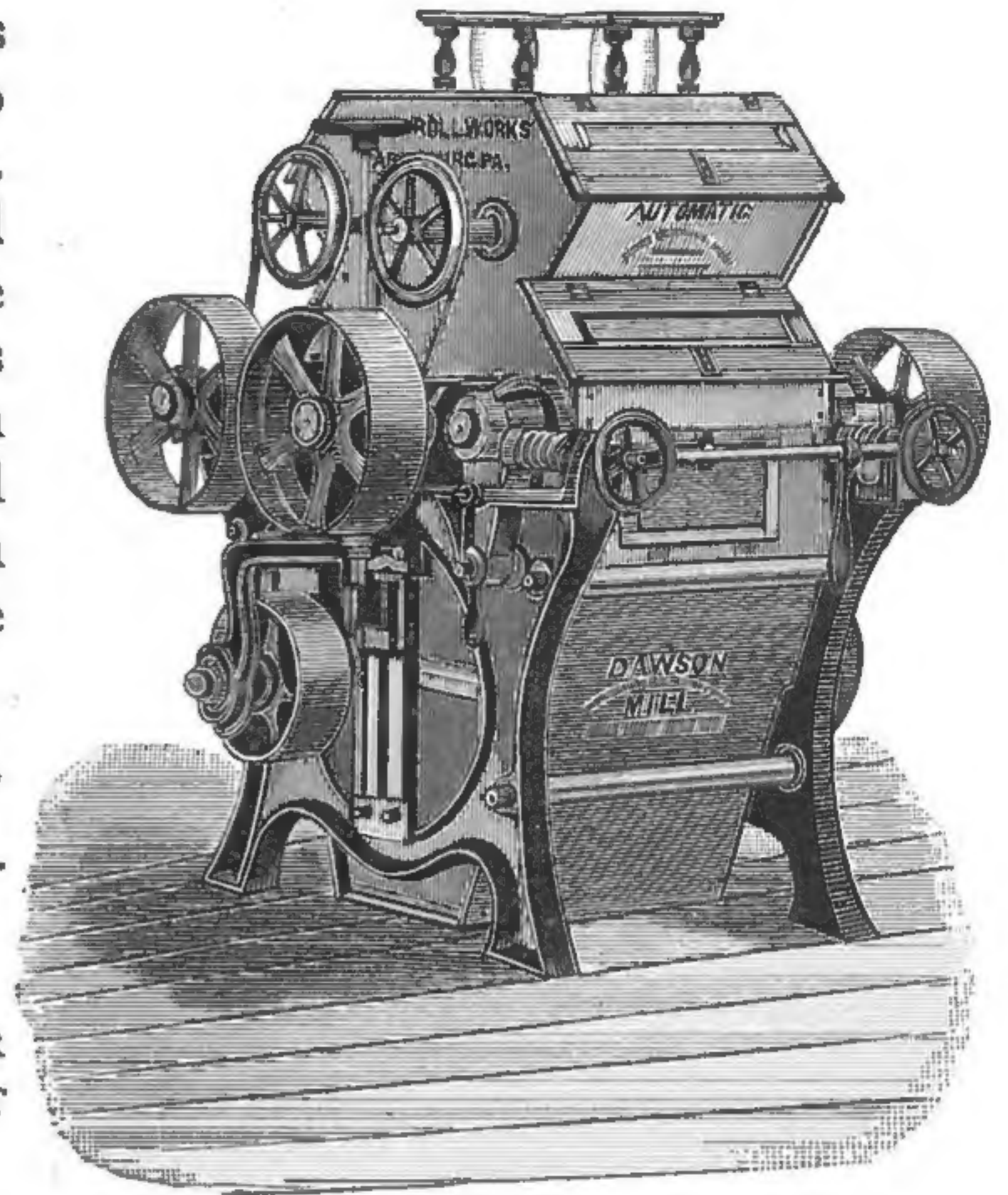
Dawson's Roller Mill

Is acknowledged to be the very best in the market. It has our Patent Automatic Centrifugal feeder, never failing to feed the stock the full length of rolls in an even sheet. It is the Latest and Best feed out, uses less power and is simple in construction. It can be placed on any style of machine with little expense. We use for roll bearings phosphor-bronze metal which will admit rolls being run at any speed without heating and with little friction, and uses little oil. We use the Dawson Corrugation, which is admitted the best in long or short system mills as the action is granulating rather than CUTTING.

We have a large plant to Re-grind and Re-Corrugate Rolls.

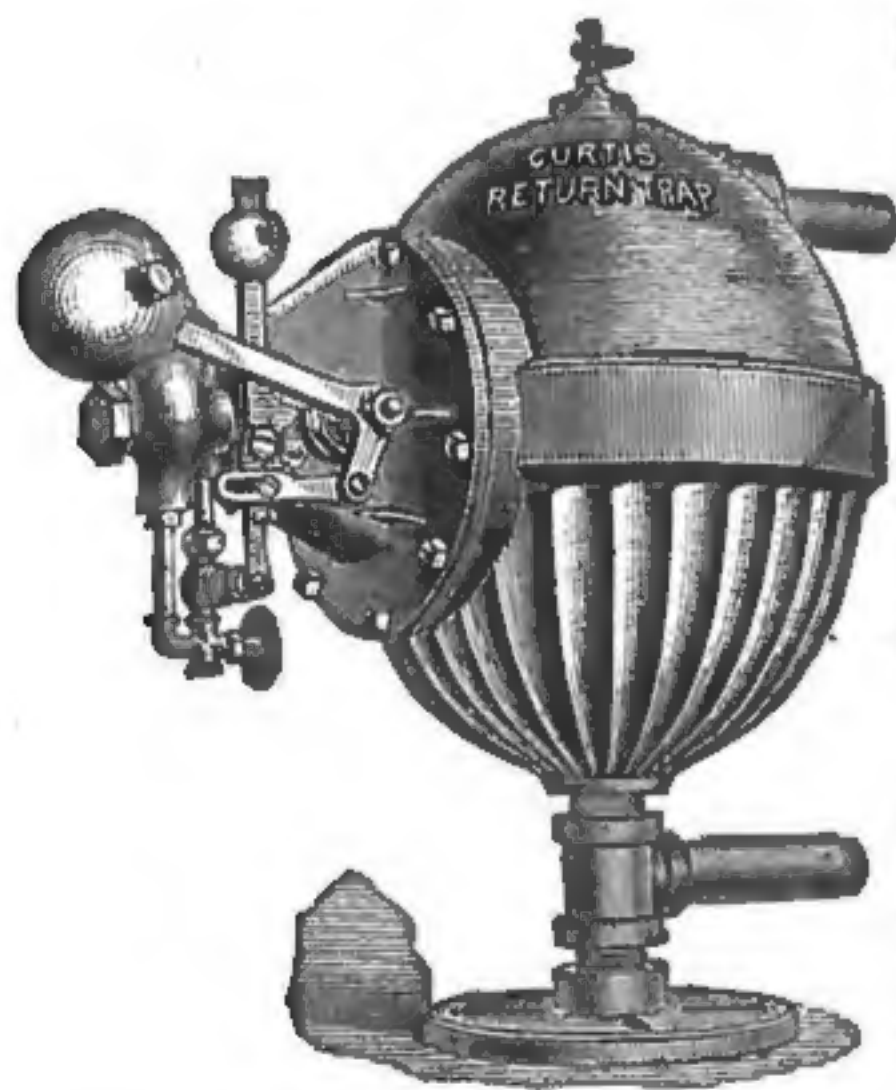
Owing to our late increased facilities and central location we are enabled to ship goods promptly on the shortest notice.

PARTIES CONTEMPLATING REMODELING THEIR MILLS OR BUYING ANY ROLLER MACHINES ARE REQUESTED TO PUT THEMSELVES IN CORRESPONDENCE WITH US.



FOR PRICE LISTS AND CIRCULARS, ADDRESS,

Dawson Roll Works, Harrisburg, Pa.



THE CURTIS PATENT RETURN STEAM TRAP.

It is noiseless, positive, rapid, will return all condensation back into the boiler, and works equally well in connection with reduced pressure or exhaust steam, also when the return is below the water line of the boiler.

THE CURTIS REGULATOR COMPANY,
No. 74 BEVERLY ST., BOSTON, MASS.

GENERAL AGENCIES.

NEW YORK, 109 Liberty st. CHICAGO, 218 Lake st.
PHILADELPHIA, 2035 N. Front st. ST. LOUIS, 511 WALNUT ST.
MINNEAPOLIS, 210 S. Third st. NEW ORLEANS, 21 Union st.

L. L. WHITLOCK,
Advertising Agent

FOR MANUFACTURERS.

TRADE JOURNALS A SPECIALTY.

P. O. DRAWER 5323. Boston, Mass.

As Agent for Advertisers instead of Papers, I obtain the Best Rates Possible for my Customers.

The Canton Cabinet Filing Case Company, Canton, Ohio.

MANUFACTURERS OF

The New Buckeye Document Case & Letter File; Also All Kinds Office Furniture

NO. 8 Represents one side of one of our Revolving Cabinet Letter Files and Document Cases Combined. It contains 80 Document Drawers and 8 Letter File Drawers. In filing letters we use first VOWEL of name on front of drawer, and LETTER FOLLOWING first VOWEL on Index Sheet within drawer. We also make more exhaustive systems which contain from 6 to 100 or more Filing Drawers.

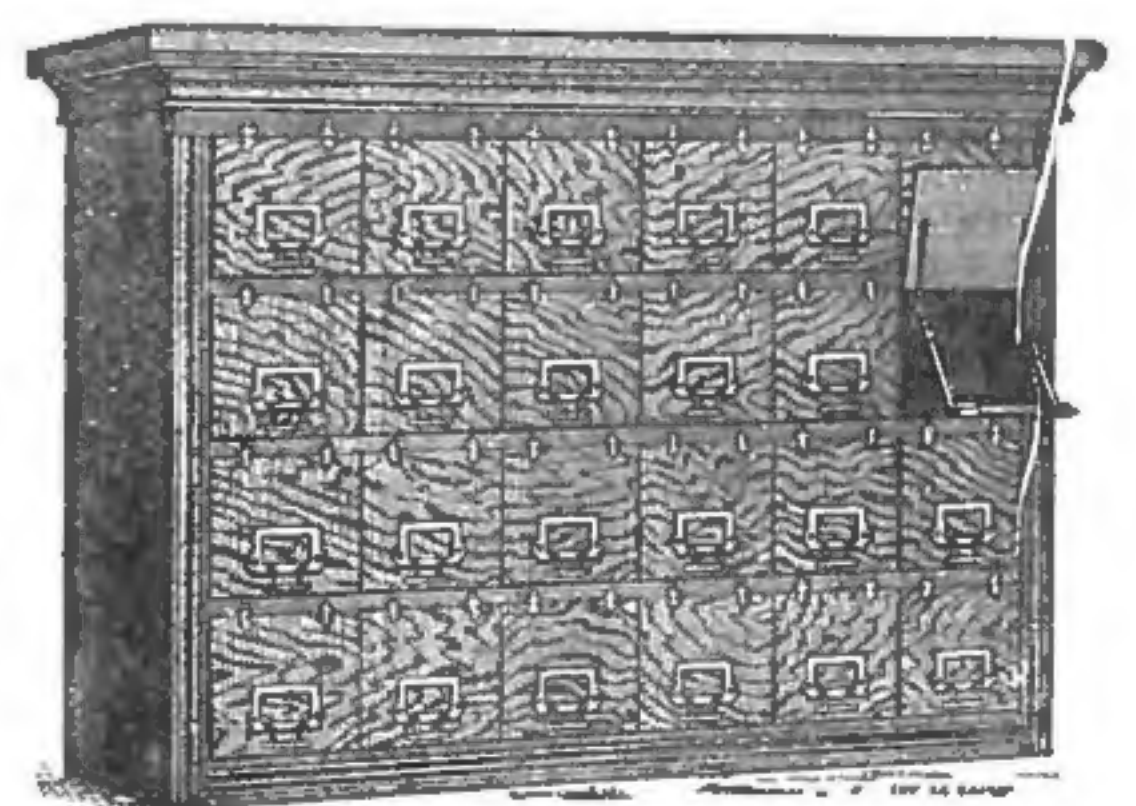
NO. 1 Represents one of our small Document Cabinets, for use on desks or brackets. Action of drawer can be seen in the cut. When front is raised inner drawer comes forward, exposing contents of drawer for inspection.

Our Cabinet Files are Conceded to be the Most Convenient of Any in the Market. They are Compact, Simple, Complete, Durable and Ornamental.

SEND FOR PRICE LIST AND CATALOGUE.



NO. 8.



NO. 1.



PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Over Bank of Attica.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS McFAUL. JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in unregistered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisements taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD,
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

WANTED.

Western New York, Ohio and Pennsylvania mills in want of a temperate miller, with 20 years experience, should write to the undersigned, who is now running a first class mill, but would like to make a change this fall. Address, W., care of THE MILLING WORLD. 58

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office, 10 cents must be added to pay postage.

FOR RENT.

Water power grist mill. Three run stone, fair order. Good opportunity. Require but little capital. Apply to M. D. OLNEY, Irvine, Warren County, Pa. 111

SITUATION WANTED.

As miller, by an active young man, used to rolls and stones. Strong, willing and not afraid to work. Best of references. Address 'E. N.,' 109 East Eagle street, Buffalo, N. Y. 811

FOR SALE.

Several good second-hand and new turbines of various styles. Second-hand price list and descriptive matter and prices of our new machines sent free. Every one interested in the shortest route to successful milling on rolls or in grinding corn and feed with the least expense of power, should address us before buying.

FLENNIKEN TURBINE CO.,
Dubuque, Iowa.

8tf

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.
One 14-Inch Vertical Feed Mill; best make, new, a bargain.
One No. 6 Dustless Separator; new, a bargain.
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.
One No. 2 Purifier. New. Best make. A bargain.
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

MILLERS

Wanting Bolting Cloths should write for discounts on same before purchasing elsewhere to

SAMUEL CAREY,
17 Broadway, New York.

FOR RENT.

Clifton Mills, at Black Rock, Buffalo, for rent on reasonable terms, recently repaired and put in good order. Apply to CHAS. DANIELS, over 311 Main Street, Buffalo, N. Y. 8tf

WANTED.

A miller who can purchase an interest. Business rapidly increasing. Must enlarge mill and add machinery. Only mill in this, Gray's Harbor, region. Good water-power. Address, REV. HIRAM F. WHITE, Elma, Chehalis County, Washington Territory. 710

GRIST MILL.

For sale or to rent, situated at South Plainfield, one eighth mile from Lehigh Valley R. R. Station. Two miles from Plainfield, N. J. Has an overshot wheel, with three run of stone, with necessary machinery, never-failing stream, considered the best in the State for its size. For suitable tenant may put in a roller system. Ice pond capable of furnishing 20,000 tons per annum. Apply to C. BRAKER, Jr., 215 Pearl Street, New York. 8

EVERY inventor, of course, should be protected in all his patented inventions. That is simple justice to the inventor. No invention should be allowed to cover what is not within its scope. That is simple justice to the public. Both inventors and the public are concerned in having all disputed patent cases promptly and authoritatively settled. That is simple justice to all.

EVERY day we hear prophecies concerning the re-entrance of the buhr and the partial exit of the roll. The prophets are quite sure that there is soon to be a great change, and yet, out of a list of 100 mills of various sizes, started in the past year, in various parts of the Union, at least 90 are pure roller plants. The prophets may reap great pleasure from their rosy views of the future, but they must not forget the cold, stern, hard facts of the present.

RIGHT or wrong, the handlers of the new winter wheat are evidently determined to decry its quality. The speculators and the middlemen are united in declaring that very little of the grain will grade high. All this may mean that the farmers are not "shelling out" their wheat fast enough to suit the speculators, who are able to manipulate the crop most safely and profitably to themselves after they have drawn the great bulk of it from the farmers, and who hope, by systematic decrying, to force the farmers to let go their grain more freely. We do not find, on inquiry among millers, that the new winter wheat is so poor as the disinterested speculators would make it appear, and we venture to say that, when speculators have once gained control of the bulk of the crop, its quality will, all at once, without visible cause, improve as rapidly and as amazingly as it has now, all at once, without visible cause, deteriorated. The speculators are fertile in tricks, and there may be a big cat under the meal in the present instance. Naturally, when the speculators are buying, the grain is very bad, but when these same speculators come to sell this same grain, naturally this grain will be the finest in the history of the world.

ACCORDING to the reports of the past two weeks, the condition of the winter wheat in the United States is not so good as it might be. It is reported to be very difficult to get fine winter wheat for milling. The critics assert that the grain is "shriveled," and so on through a long list of faults. It is singular that wheat, which was at first pronounced exceedingly fine in quality, should all at once be found to be bad or poor. The sudden change of front looks like a bull movement. Naturally the spring-wheat interest finds it pleasant to assert that the winter wheat is worthless, and that it will require an average of five bushels to make a barrel of flour, but it will be well not to overdo the matter. It is by no means proved that the winter wheat of this crop is so bad as it is asserted to be. Numerous samples from various sections show all right. Reports of average show all right for the quantity of grain to the barrel of flour. Grinding is not reported to show any unusual conditions. In only a few cases have complaints come in response to direct inquiries, and the basis of those complaints is not given. Possibly some of the "shriveled" grain said to be found in the winter wheat of 1889 grew in the summer of 1888. Our reports mainly show that the millers are satisfied with the new wheat, both spring and winter. Complaints are about equally divided between the two, and millers in general will wisely discount the talk of the dealers and speculators who are always ready to say any thing which will elevate or depress wheat prices to suit them.

MINOR MILLING MATTERS.

Following is an abstract of a paper prepared by J. H. Macdonnell, of Stockton-on-Tees, England, for the Paris convention of the National Association of British and Irish Millers, read by Secretary Chatterton. The subject is "Minor Milling matters," and the substance is as follows: "One of the chief matters in the modern system of flour-milling, which up to a recent date has received but scant attention, is that of thorough and efficient wheat cleaning. We all know how frequently flour-mills have been remodeled and fully equipped with the most perfect rolling, purifying and dressing machinery, while the wheat-cleaning departments were never even looked into. It is also pretty well known that, whereas all this outlay and labor had been spent on the mill proper, uniform good results were not always obtained, and that a change from one kind of wheat to another greatly altered the quality and value of the flour produced, the difference showing itself more pronouncedly in the 'patents.' In fact, impurities showed themselves in the semolina and middlings, which no amount of manipulation on the purifiers could eliminate. Millers who carefully studied the matter and made microscopical examination found that much of the impurity was mineral matter, and in searching back found that the wheat-cleaning machinery was unequal to the task of removing this matter completely. Others overlooked the cause and condemned the wheat, which, if properly and sufficiently treated, would have yielded a high-class flour.

"As well as mineral matter, there are frequently found among the middlings small foreign particles of about the same size and practically the same weight as the particles of middlings, which, when rolled, become reduced to fine powder, pass through the flour-dressing machines and contaminate the flour. This is owing to the fact that some seeds about the same size and gravity as the wheat have not been extracted. I am going on the assumption that ordinary small seeds have been extracted. In some mills one may find the inner casing of the first-break rolls, and indeed of the second-break also, covered with a layer of dark-brown dust, proving conclusively that the wheat in those mills might be more thoroughly cleaned. This all points to the necessity which exists for securing in the first place the most perfect arrangement possible for thoroughly cleaning and polishing the wheat berry, while extracting every particle of foreign matter, if the highest standard of flour is sought after. The details of such an arrangement may have been thought of minor consideration by some millers, but it is on these very minor matters that the successful result of the manufacture, or the contrary, depends. It is unnecessary for me to point out the *modus operandi* which, to my mind, presents itself as the most perfect by which to attain this thorough and efficient wheat-cleaning. You have to keep in view the fact that, owing to our dependence on the markets of the world for the greater portion of our wheat supplies, the varieties of quality are numerous, and that provision should be made to handle each and all of them to the best advantage, always remembering that the arrangement must be so comprehensive that any change of wheat containing from the least to the greatest variety of foreign matter, or varying in size from the smallest to the largest, can be dealt with in a satisfactory manner. I would impress this recommendation, as one may say, 'Well, my mixtures are generally made up of such and such wheats, the impurities in which I know to be so and so, which can easily be eliminated by this or that apparatus already in the place.'

"That may be all very well for a year or two, until the particular wheats you depended on are not to be had, then the difficulty comes in. But, without waiting for this difficulty to arise, how often does it not happen that a cheap wheat is offered, which you know would answer your purposes very well, but you are deterred from buying it owing to the impossibility of dealing with the impurities in it with your present imperfect appliances? Get these, then, into the most perfect and complete order that you can, if they have not already been remodeled; and when the alterations are being carried out, see that the arrangement is made with as few complicated, and what are called 'combined,' machines

as possible, and that plenty of light and air is admitted all round, and particularly that the wheat leaving every machine is well aspirated. Have neither a fan nor a dust-collector in your screen-house. Let those be placed outside the mill for the greater safety of the property and the reduction of fire insurance rates. After the wheat has been cleaned and sized, and before passing it through the automatic weighing-machines preceding the first-break rolls, I recommend a thoroughly good aspiration, so that no possibility of any dust may remain in it. If a crucial test is required to ascertain if the wheat is really clean, put a handful of it into a tumblerful of clean water, agitate for a few moments, and if the water remains clear you may be satisfied the wheat is fit to mill, but if the water becomes discolored you will understand that the wheat cleaning has been imperfectly done.

"Now that rotary scalping-sieves are more generally employed, the first-break rolls may be set to break the wheat more severely where they are used to treat the chop than where the ordinary scalping-reels perform this work, and yet, although the rolls are set closer together, the quantity of break-flour will be found to be less from a sieve than from a reel, the quality of the semolina better, and a larger quantity of the germ detached. With reference to breaks, I consider the number of these might with advantage be reduced from the usual six to five, or, when very dry wheat is handled, to even four. In thus reducing the number of breaks I do not for a moment suggest the idea of reducing the granulating surface; on the contrary, I should recommend that it be increased and extended to rather more than millers now employ for six or seven breaks. If the rolls are employed for granulating, it is advisable to have them as long as the circumstances of the situation will permit; 30 inches to 36 inches are perfectly safe to work with, and these keep cooler generally than shorter rolls. The aim should be to get the wheat or chop spread evenly along the entire length of the rolls, and only permit the feed to be one particle thick at any part of the roller surface, the object being of course to produce the broadest and cleanest bran-flakes, the largest quantity of good bright semolina and a minimum of break-flour. The feed-rolls or other feeding arrangements have a great deal to do with the attainment of this object, and millers will learn something by experimenting with quick-feed rolls in comparison with the ordinary slow-going rolls.

"I have heard millers say that it is unnecessary to employ aspiration on the break-rolls, but with all due respect for their opinion I think it very much needed for several reasons. The point to aspirate from is a good deal governed by circumstances, but where these will allow I certainly think from the top of the machine is the correct place and not from the hopper beneath, or, as may be sometimes seen, from the conveyer, which takes the break-meal to the elevator or the scalper. The heated air, evaporation and light dust naturally ascend, and it is only necessary to provide a means for their escape at the top, aided by slight aspiration, to get rid of these from the roller casing. Millers are all now pretty well convinced, I think, that up to a certain point sieves are better for scalping the break products than ordinary reels. One thing is frequently overlooked, whether sieves or reels are employed, and that is that the semolina and middlings leaving them and going to the purifiers are laden more or less with break-flour. Nothing is more fruitful of loss than this; it is prejudicial, too, to the quality of the bulk of the flour thereafter. First, the loss is considerable, as the moment the material goes on the purifiers, the flour is taken up with the fluffy and fibrous matter from the middlings, and although these (fluff and fiber) may be returned to the duster, the identity of the flour is lost, it is no longer so good as at the first. Flour in the middlings also causes an obstruction of the meshes of the purifier sieve surface, which hinders the proper working of that machine, while a part of the flour gets down with the middlings to the reduction rolls, becomes darkened in the rolling and prevents the rolls doing good work on the middlings. Some millers may say: We knew all this well enough before, and our technically educated purifier and machine men are quite capable of attending to such minor matters of detail. Granted; but

permit me to say there is very constant supervision required, and it is not always found that the smartest milling student at the technical examination proves to be the most attentive man to mind such minor matters. It will repay you occasionally to look into these things for yourselves.

"In some mills centrifugals are employed to dust the middlings, but the most gentle centrifugal has a tendency to break the middlings and sensibly reduce the quality and quantity of the 'patents.' The purification of semolina and middlings is perhaps now receiving more attention than at any previous time in the history of modern milling, and no miller need be at a loss to know where he can get machines to suit his purpose; but let me again impress the fact that unless the wheat has been thoroughly cleaned to begin with, and all impurities extracted, the purification of the semolina and middlings will be unsatisfactory with even the most perfect purifier, but having the semolina and middlings absolutely pure, properly sized and correctly distributed to the reduction-rolls, it will be found that their gradual reduction will be produced with greater facility and ease than under less particular treatment; the power required for reductions will be smaller. The number of the silk covers may be lowered without detriment to the color of the flour, the flour will be light and granular, and the general clean-up of the offals quickly and perfectly attained. As in the case of the granulating-rolls, so with the reduction rolls, the surfaces should be long enough for the distribution of the feed to them to be as thin as possible without leaving any portion uncovered. You will have noticed that I have confined my remarks to roller-milling principally, but it is not unlikely that before another decade we may have to write of a different kind of milling. The details will, however, always remain about the same, and it will be to the interest of every miller to see that these are all carefully and strictly carried out at all times in order to insure good work, satisfactory reports of the quality of the flour from his customers, a good yield of products and a pleasing and profitable balance-sheet at the finish."

WHAT LABOR PROPOSES TO DO.

A. B. SALOM.

Professional agitators, who have ceased to labor and gone into the business of agitation, because that business promises them less work and more pay than manual labor promises, have carried their point so far as capturing the labor movement, formulating plans of campaign and furnishing battle-cries for the protesting laborers are concerned. All the recent great meetings held in the name of labor have been called, officered, ruled and dismissed by men who have about as much right to be called "laborers" as Benedict Arnold had to be called a true and incorruptible patriot. The result is visible in all the reports of the gatherings. The genuine laborers in the assemblies modestly occupied the back seats, thought much and said little, while the professional agitators conducted the conventions and placed the true working men in a false light. A conspicuous instance of this style of procedure is furnished in the case of the recent convention of the International Labor Congress in Paris, France, when the following programme was adopted as representing to the world what labor proposes to secure:

1. Eight hours a day for the maximum day's work fixed by international law.
2. At least one day's holiday in each week, and no work on fete days.
3. Abolition of night work, as far as it is practicable, for men and women, and entirely for children.
4. The total suppression of children's labor below the age of 14, and protection of children (regulation of child labor) up to the age of 18.
5. Complete general, technical and professional education.
6. Overtime to be paid for at double rates and limited to four hours in each twenty-four.
7. Civil and criminal responsibility of employers for accidents.
8. An adequate number of qualified inspectors, to be nominated by the workers themselves and paid by the State or the Commune, with full powers to enter workshops or factories or religious establishments at any time and to examine the apprentices at their own homes.
9. Workshops organized by the workers, with subventions from the municipalities or the State.
10. Prison and workhouse labor to be conducted under the same conditions as free labor and to be employed as far as possible on great public works.
11. That no foreign laborers be allowed to accept employment, or employers be allowed to employ such labor, at rates of wages below the trade-union rates fixed for their trade.
12. That a minimum wage be fixed in every country in accordance with

a reasonable standard of living. 13. The abrogation of all laws against the international organization of labor. 14. Equal pay and opportunities for women and men for equal work.

Philanthropists, who have labored for the advancement and the improvement of labor and laborers, may well look upon this programme with dismay and disgust. The most superficial reading will convince them that it is either not the true voice of labor, or else that labor is not yet qualified to act an important part in its own amelioration. In every line is seen the work of the professional agitators, whose sole aim is, not to settle any particular point, but to postpone indefinitely all possible settlements. Working to keep labor and capital forever embroiled, these quacks have published in their manifesto a series of imbecilities and undesirabilities which they know will never be accepted or enforced. The programme reeks from beginning to end with absurdity, and the whole document contains barely enough of the reasonable, the desirable, the attainable to redeem it from utter condemnation.

Examine for a moment some of the propositions. One is to reduce at one blow the working hours in a day 20 per cent. Another is to reduce the days in a week 16½ per cent. These two reductions mean at least 36½ per cent. reduction in the time devoted to manufacture throughout the world. Another reduction in force is the proposed prohibition of work on fete days, and that would swell the total proposed reduction to 40 per cent. or more in time. The quacks do not pretend to tell how supply is to keep up with demand in case manufacture is reduced by 40 per cent. With such simple questions as that the true professional agitator has no time to deal. His attention is centered upon the lofty, the ideal, the abstract, the absurd, the impossible. He proposes to let the world get on as best it can by feeding on 60 where it needs 100. These are two of the objects for which laboring men are contending, if we are to believe the published manifesto of the Paris assemblage.

Examine further. It is proposed "to abolish night work so far as practicable." Is there any important industry in which night work is not the choice, but the necessity, of the employed and employer? It is proposed to suppress the labor of all children under the age of fourteen years. Supposing the suppression to be possible, what is to become of the thousands of thousands of children, waifs, gamins, orphans, who, being without support, are forced to support and do support themselves? Do the quacks propose to abolish the newsboys, the door-boys, the bell-boys and the other young workers by legislation? If they are forbidden to work, what will they do? Will the quacks care for them, feed them, house them, clothe them, educate them and start them in life at a suitable age? Evidently this proposition contains enough of the impossible to stagger the bravest observer, but the professional agitator quacks have no difficulty at all on the points involved. To them it is all as clear as day and as easy as falling down a precipice.

Furthermore, they propose to have every individual well educated, generally, technically and professionally educated, but how, where, by whom, or at whose expense, they fail to say. Overtime is to be limited by law, leaving owners and employers no choice in emergencies but to sit down and wait, and lose, until the legal time arrives and the laborer can legally go to work! Employers are to be made civilly and criminally responsible for accidents to employees, so that, when a clumsy or careless employe sticks his hand onto a saw and gets it sawed off, or his foot under a trip-hammer and gets it smashed, the law will confiscate the estate of the owner of the saw or the hammer, give it to the clumsy or careless victim, and end by imprisoning the unlucky owner for the rest of his life! Walking delegates are to walk and order and demoralize at the expense of the state or the commune! Workers are to organize workshops that are to be subsidized by the state! Rates of wages are to be settled by the employed, not by the employers!

These are some of the peculiar aims of the so-called leaders in the so-called labor agitation! Could insanity go further? Can true friends of true labor afford to favor in the slightest degree such a programme as that? Let any man of average

intelligence, desirous only of arriving at the truth and having no hobby to prove or disprove, examine this revolutionary, high-sounding, far-reaching manifesto, following in every case where it logically leads, and he can but conclude that the Paris programme, if generally adopted by workers as their plan of campaign, will mark a distinct backward step. Laborers can hope to gain nothing by foolishly following fanatics into the quagmires of industrial and social disorder and financial and commercial disaster, into which they are invited by the Paris programme and all similar insane, incendiary and dangerous proclamations.

CANADIAN MILLERS IN COUNCIL.

Canadian flour-makers are finding no relief, under the crop conditions of this season, from the unjust competition with American flour-makers to which the inequitable tariffs on imported grain and flour have subjected them for some time. On the 14th of this month, at St. Thomas, Ontario, a meeting was held by the Local District Branch of the Dominion Millers' Association. J. Campbell, of Campbell, Stevens and Co., St. Thomas, was president, and W. J. Saunby, of London, was secretary. Among those present were David Plewes, Brantford, secretary of the Dominion Millers' Association; J. W. Plewes, Glencoe; J. Vollans, Windsor; H. Hollingshead, Dutton; Martin, of Alvinston; Pincombe, of Strathroy; Scott, of Highgate; and S. May, of St. Thomas. A number of farmers from Elgin county were present and took part in the meeting.

Mr. Plewes spoke on buying wheat by tester. Two farmers, Messrs. Turner and Charlton, took exception to the scale adopted by the millers in buying standard wheat as an unfair one to the sellers. For wheat 60 pounds in weight the standard price is paid; for wheat 57 pounds in weight a reduction of 5 cents is made, while for wheat 63 pounds an increase of but three cents is given. This they thought an injustice. Messrs. Plewes and Scott explained that 57-pound wheat is comparatively worthless, and many millers will not use it at all; the difference between 60 and 64 pound wheat was not so marked as between 58 and 60 pound. The mode of testing wheat was explained, and it was pointed out that while the half-bushel tester was preferable as being more satisfactory to the seller, there was, as a matter of fact, no practical difference between the testers, provided they were stamped as correct by the government. The mode adopted in testing was also explained, the statute requiring the wheat to be poured into a stationary funnel at least 2 inches above the measure. The object of requiring to have the funnel stationary was explained by the fact that a difference of 2 pounds in weight could easily be made in the weight of wheat by the manner of filling a half-bushel measure.

In reply to a question by Mr. Charlton, Mr. Plewes explained why speculators in grain could afford to pay one or two cents more a bushel for wheat than millers. Shippers bought for speculative purposes, and in many instances millers were obliged, when confronted with large orders, to buy from the shipper at an advance of 2 or 3 cents over the market price; but they were willing to be bled to this extent, for if they went to a farmer and offered him 2 or 3 cents over the market price he would think there was something in the wind and refuse to sell at all except at \$1. Besides, shippers only bought at certain seasons of the year, while millers bought constantly. Mr. Campbell stated that as a matter of fact there had not been one car-load of wheat purchased by shippers on St. Thomas market this year. At the ruling price in wheat in Liverpool to-day, the man who shipped would experience a dead loss of eight to ten cents on every bushel forwarded. Mr. Plewes quoted the ruling figures for wheat in Liverpool October 14 at 6s. and 11d., and showed that a shipper purchasing on the St. Thomas market at 85 cents on that day and shipping it to Montreal and thence to Liverpool would, after paying the railway and ocean freight and cost of transshipment at Montreal and Liverpool, realize but 79 cents per bushel, a dead loss of 8 to 10 cents on every bushel.

Secretary Plewes pointed out the injustice of placing a duty of 21½ cents more on the raw material than upon the

manufactured article and showed the injury which had been inflicted upon the miller as the result of this discrimination. He said: "During the last fiscal year 264,723 barrels of flour, equivalent to 1,257,434 bushels of wheat, had been brought into Canada, the duty upon which was but \$132,352, whereas, if the raw material had been brought in and the wheat ground by Canadian millers, the duty would have been \$188,618. A bonus had thus been granted to the United States millers of \$56,256, and the result had been to reduce the output of the Canadian mills and send millers, coopers and others across the border to work for the employers in whose favor our Government were discriminating. The grievance commenced under the Mackenzie Government way back in 1873. When, upon the abrogation of the reciprocity treaty, the American Government placed a duty of 20 cents on wheat with 20 per cent. ad valorem added, and \$1 per barrel on flour, practically closing their markets to Canada, the injustice was pointed out to Mr. Mackenzie's Government, and retaliation was asked for, but even a small duty was denied us. American millers sent 314,520 barrels of flour into our markets free in one year, but although a duty was placed on every thing the farmer and miller had to buy, no protection was given him on the articles they had to sell. Sir John's Government at the request of the millers placed a duty of 50 cents per barrel on flour. This was all they asked, believing it would be sufficient. The result has proven the contrary. Although the first year of the imposition of the duty the import fell from 313,520 to 121,799 barrels and finally to 62,000 barrels, it has again advanced to figures quoted, 264,723, and the reason is obvious. When the duty was adopted the freight on wheat from St. Louis to Toronto was 60 cents per barrel, now it is but 30 cents, so there are 30 cents of the duty gone in the matter of freight alone. During the past three months over 100,000 barrels have been sent in. Large quantities of wheat were bought by the Minneapolis and St. Louis millers when the cereal ruled at 73 cents per bushel (it is now 78 cents), and they have crowded our markets with flour manufactured from this wheat. At the present time roller flour manufactured from this wheat is selling in Halifax at \$4.85, destroying any competition from Ontario. It is for this reason we ask that farmers assist us in an effort to remedy the injustice which exists. The residents of the Lower Provinces are opposed to the imposition of additional duty, as they are afraid that they will have to pay more for their flour and that there are not sufficient mills to grind it. As a matter of fact, the milling capacity of the Dominion is 15,000,000 barrels, while the total consumption is but 6,000,000. Many of the mills are only running 6 hours per day, and others are idle, while if the duty was increased another 25 cents or 50 cents per barrel on flour Canadian millers would get the grinding."

He instanced a case where Christie, Brown and Co., of Toronto, had imported 10,000 barrels of flour from Minneapolis a few days ago, and another case where under the Mackenzie Government a Walkerville mill had to close down owing to Detroit millers flooding the country with flour. After a discussion of other questions, including the "Flour Exchange Table," the meeting voted to hold the next session in Sarnia, November 11, and adjourned.

MILLING PATENTS.

Among the patents granted October 8, 1889, are the following:

Lester A. Gillett, Leonardville, Kan., No. 412,382, a grain-weigher.

Edward B. Mower, Cedar Rapids, Ia., No. 412,523, rolled rye.

CONTEMPORARY COMMENT.

We have a hundred or more circular letters issued by the Consolidated Roller Mill Co., "Big 4," sent us by millers. The opening paragraph of the letter says: "We are now engaged in the business of settling with millers our claims against them for infringement of our patents in the use of our roller-mills, which are not licensed by us." And the sen-

timent of the letters that come from millers who send us these letters leads to the belief the sword is a two-edged one, that bulldozed millers are almost unanimously, but silently and without concerted action or formal announcement, engaged in the boycott of the Consolidated Roller Mill Co., and that the game, as now played, means just what the late E. P. Allis said it would, if pushed.—*St. Louis "Miller."*

THE BOOMING OF THE BUHR.

Following is the call sent out for a meeting of buhr millers in Detroit, Michigan, in September. It explains itself:

AGAIN COMING TO THE FRONT.

"THE OLD STONE FLOUR."

The public are awakening to the fact that the so-called "patent flour" is not only very poor food, but also dangerous to health. The best part of the nourishment and life-sustaining principle, both to the body, the brain and the nerves, is removed and goes into the offal, by the patent rollers, and is lost so far as any benefit to the human race is concerned. No regular physician will recommend its use. It is prohibited in every insane asylum and hospital in the land. Insanity and kindred diseases are rapidly increasing. The human race are fast losing their teeth, and dentists are multiplying by hundreds in every part of the country. And for why? Ask any well-posted physician, and he will tell you because of the removal of the germ and phosphates from the flour consumed by the people, and made by the rolls, and that the only flour fit for food and conducive to the general health of the user is that made by the old-fashioned French buhrs. In view of the above facts, you are hereby notified that we propose to give notice to every stone miller in the state that we desire to form an association to be known as the "Old Stone Millers' Association of Michigan," and that you are earnestly requested to meet in general assembly at the parlors of the Wayne hotel, in the city of Detroit, on Tuesday the 24th day of September next, at 10:30 a. m., for the purpose of forming such an association, selection of officers and transacting such other business as may come before us. We want to try and open the eyes of the public to their own interest, and in so doing we recognize the aid and generous assistance, the telling and forcible argument of Dr. Newth, of Detroit, who is now lecturing to the public in halls and in the open air, and convincing his hearers that while they get the "snow white" patent flour for six or seven dollars per bbl, they are losing money by having to pay sixteen hundred dollars per bbl. for patent medicines. And we take pleasure in saying that Dr. Newth will also be on hand at the day and hour of the meeting at the Wayne hotel, Detroit, Sept. 24, (exposition week), to talk to us, and therefore you are earnestly requested to communicate by mail on receipt of this circular, and return envelope enclosed, with the secretary and give us your co-operation, counsel and advice, or at least bid the association a hearty God-speed and assure the secretary of your presence at the first meeting on the above date. We want every stone miller in the state to be present, and all must assist and work together in disseminating the "good news of glad tidings" that surely ought to dawn upon the world again, and furnish food fit for both brain and body. Will you be on hand? Yes. Good enough.—Shake. By request of many stone millers.

JOHN HARDENBERG,
Secretary and Treasurer.

Farmington, Mich., Sept. 2, 1889.

The meeting was held. The millers present numbered eight. "Dr. Newth" was present and in a ringing lecture convinced the eight stone millers that they are in the right in sticking to the old-fashioned buhr. The slim attendance does not speak well for the size of the army of buhr millers in Michigan. The name "Association of Michigan" seems to be larger than the association itself, but the same thing may be said of the "national association." Success to the buhr men, who propose to prevent millers from extracting our teeth before we have eaten them! All hail the exit of toothlessness and the re-entrance of the buhr!

UNRELIABLE CANADIAN CROP REPORTS.

Canadian crop reports are becoming proverbial for exaggeration and misrepresentation. The following instance is given in a dispatch from Montreal, Quebec, dated October 12, which says: The farming population of the Province of Quebec, particularly the French "habitant" portion, is threatened with great suffering this winter owing to the failure of the grain crops, on which it principally depends. The Department of Agriculture has just issued crop reports. In wheat a glowing description is given of an abundant har-

vest, but from every part of the Province contradictions of the exaggeration contained in the report are pouring in, which, the farmers claim, has only been issued lest the rumors of crop failure might reach England and France and prevent the coming of emigrants to Canada. A note of warning of the serious state of affairs just comes this morning from Huntington, in which district alone the failure of the pea crop entails a loss of half a million dollars. In the parishes of Sainte Martine and St. Louis wheat last year was exported to the extent of 100,000 bushels. The "habitants" will have to buy seed for next spring's sowing, this for the first time in a quarter of a century. The "habitants" have been deprived of their chief means of support and find themselves standing face to face with starvation. The outlook is black for the unfortunate people, as possibly famine may result, and the merchants on all hands are being warned not to press sales in the Province.

THUSLY sings the Coldwater, Kansas, "Echo": The chigger may chig with all his might, and the mocking-bird mock and sing, but the Kansas crop it takes the cake, and corn, you bet, is king. The crickets may crick and the froglets frog and the farmer sing his strain, for in Kansas corn is away on top, a result of plenty of rain. The chinch-bugs may chinch and the grasshoppers grass and the hot winds make you tired, but if any one says there are such things here, just call him a horrible liar. Now Oklahoma may boom and Texas may howl and Missouri shoot off her chop, but Kansas is the place to get a good home and raise a great big crop.

A DECISION rendered in the United States Courts on October 7 may damp the ardor of certain milling patent litigants perceptibly. Litigation is "mighty onstartin" sometimes. Every person concerned should keep a level head. This is a big country. The milling interest is a big interest. The manufacturers of milling machinery are many, and they will not surrender their business until they are forced to. Inquiring millers will do well to remember these facts. Monopolies that claim the earth and the fullness thereof go into court generally with the chances against them.

FRENCH millers, who in 1889 are just beginning to join the roller-milling procession, must experience curious sensations when they pick up the French patent records of 1823 and read about the roller-mills patented in France in those far-off days. Had French perseverance only been equal to French ingenuity in those days, France would have been the first nation to make roller-milling a success. Perhaps the same prejudice in favor of the buhr ruled in those days in France that rules to-day, and that may account for the singular fact that the country first to invent roller-mills is the last to adopt them extensively.

SPECIAL NOTICES:

BOLTING CLOTH.

Do not order your cloth until you have conferred with us. It will pay you, both in point of quality and price. We are prepared with special facilities for this work. Write us before you order.

CASE MANUFACTURING CO.,

Columbus, Ohio.

Office and Factory, 5th Street, north of Naughten.

TOLEDO MILL PICKS AND STONE TOOL MFG. CO.

Manufacturer

and Dresser of

MILL PICKS.

Made of the best double-refined English cast steel. All work guaranteed. For terms and warranty, address, GEO. W. HEARTLEY, No. 297 St. Clair Street, Toledo, Ohio. Send for Circular.

N. B.—All Mill Picks ground and ready for use (both old and new) before leaving the shop. No time and money lost grinding rough and newly dressed Picks. All come to hand ready for use.

ALSO MANUFACTURERS OF

Shafting, Pulleys, Hangers, Coupling, Machine and Jobbing, Etc., Etc.



THIN IRON SHEETS.—Iron is rolled so thin at the Pittsburgh iron-mills that 12,000 sheets are required to make a single inch in thickness. Light shines through one of these sheets as readily as it does through greased tissue-paper.

TO MAKE HOLES IN STEEL.—Sometimes great difficulty is experienced in making holes in steel that is too hard to cut or file easily. This is effected by the following mixture: One ounce of sulphate of copper, quarter of an ounce of alum, half a teaspoonful of powdered salt, a gill of vinegar and twenty drops of nitric acid.

GENERAL NOTES.

LONDON is believed to be the largest city in the world. In 1881 that portion of it included within the registration area had 3,814,571 inhabitants, occupying 75,362 acres. "Greater London," as the entire London police district is called, had 4,764,312 inhabitants, occupying 687 square miles. At present "Registration London" alone has hardly less than 4,250,000 souls, and "Greater London," or the whole city, has probably over 5,260,000.

POINTS IN MILLING.

THIS year there may be, and there is, less cause to watch carefully at the grain-receiving door of the mill than there was last year, but still it will not do for the miller to neglect that very important point in his business. This season's wheat is reported to be generally good, fine, large, plump and easy to mill, but, just as usual, there will be grades and grades in grain, and therefore the miller must not take it for granted that inspection of supplies purchased is not necessary. He should see and know, beyond doubt, that he is receiving just the grade for which he has paid his money. He can do this only in one way, and that way is to inspect each bag as it is emptied.

WHEN a seller is caught delivering grades below those bought and paid for, he generally has ready the excuse: "It is a mistake." Who ever saw the "mistake" in favor of the miller and against the seller? In all the thousands of "mistakes" in this line which I have detected in my own business, I never found a single "mistake" which gave me a grade of wheat higher than that for which I was paying. Without one exception the mysterious "mistake" was always against me. If any seller ever succeeded in making me pay him for a grade below that bargained for, he is welcome to the few dollars out of which he cheated me, and he can enjoy them with my blessing after he has compromised with his conscience.

Do I mean to say that all grain-growers and grain-dealers are thieves, frauds, rascals, scoundrels, and not to be depended upon? Not at all! They are, each and every one of them, honest, incorruptible, generous and reliable, but, at the same time, they are human, and humanity is liable to error, to "mistakes," and it requires the closest watching on the part of the miller to aid them in preventing "mistakes" at the grain door. Do not watch the seller merely to catch him doing wrong, but for the nobler moral purpose of helping him to avoid those "mistakes" which may benefit him incidentally by wronging you directly. Watch every bushel of wheat you receive. That is "business." That will insure you against "unaccountably bad flour" every once in a while. That will prevent "curious streaks" in the quality of the product of your mill. Best of all, it will improve the moral tone of your supply men. If there is any real piety

in milling, it is to be found where you, as buyer, meet the seller, at the receiving door or bin.

CORN-MILLERS should remember that the shrinkage of corn after it is cribbed goes on constantly for a considerable time. Investigation and experiment have shown that the shrinkage ranges from 5 to 33½ per cent. This shrinkage must be taken into consideration by the meal-maker who is buying corn to be ground months hence.

THE European milling journals, which had so much to say about the Haggemacher "plansichter" some time ago, have evidently not heard of that little tussle at Louvain, Belgium, where the "plansichter" ran up against the Smith competitor and got cleaned out unceremoniously and unqualifiedly. Since that memorable contest little has been heard about the "plansichter" on this side of the ocean.

WHEN the middlings-purifier fails to make a clean separation, examine it carefully. Sometimes the middlings will be found flowing too rapidly. At other times the feed starts all right, but a little way down it gets balky and starts to run across the sieve diagonally instead of continuing to move in a straight line. Again, the middlings may refuse to flow freely and may pile up at the head of the sieve. If the trouble be with a too rapid flow of the material, the evil may be remedied by setting the springs or hangers farther back towards the tail end of the purifier. If the stock runs diagonally, while the sieve is about level, the springs or hangers may be adjusted so as to accelerate the flow on the slow side and to retard it on the rapid side. In the case of the piling-up at the head of the sieve the trouble may come from a sudden excessive feed of middlings, from too loose silk, and from a bad throw of the hangers. The remedy can be applied as soon as the source of the evil is known.

SOMETIMES the material will, apparently, be moving properly, in a uniform stream all over the sieve, at the correct rate, with all the air-valves wide opened, and yet there is imperfect separation, and the tailings do not show the proper amount of fluff and seconds. In this case the evil is not so easily cured as in the others. Generally the trouble may be removed by changing the dust-catcher so as to interfere less with the movement of the air-currents, or by increasing the speed of the fan until the currents perform their work properly. Some days there seems to be a disposition on the part of the purifier and all the other machines to raise a rumpus. It may be an electrical condition of the atmosphere, or any other occult condition of things beyond sight and sound, but every miller knows that there are times when no amount of care seems to be sufficient to keep things going as they ought to go. On such days the praying miller has a decided advantage over his non-praying cotemporary. Whatever the sort of day, always be watchful.

CHAFF AND FLUFF.

A Nashua contemporary says that the appointment of Mr. Wheat as postmaster up there goes a little against the grain.—*Grocers' Gazette, Boston.* If they awn in ill-bread fashion or make rye faces over the appointment, dough n't fail to make an oat of it and report to Secretary Rusk, who takes the cake for straightening out tangled questions.—*MILLING WORLD, Buffalo, N. Y.* Of course, a short grain crop in Europe is a rather sad thing to think of, but the interest on American farm mortgages is still sadder. Let her shorten.—*Minneapolis Tribune.* If they bull, the market generally declines, and about the time most of them turn bearish and sell, the market goes sky-rocketing. "Its weakest when its strongest, and it's strongest when it's weakest," is the way one whip-sawed trader put it, and he was right.—*Post Dispatch, St. Louis.* A life-size statue of Old Hutch, done in corn, would be an appropriate ornament for the art rooms of the Sioux City corn palace this year.—*Chicago Tribune.* In most respects the cabbage is a head of other vegetables.—*Exchange.* It can never ketchup with the tomato.—*Another*

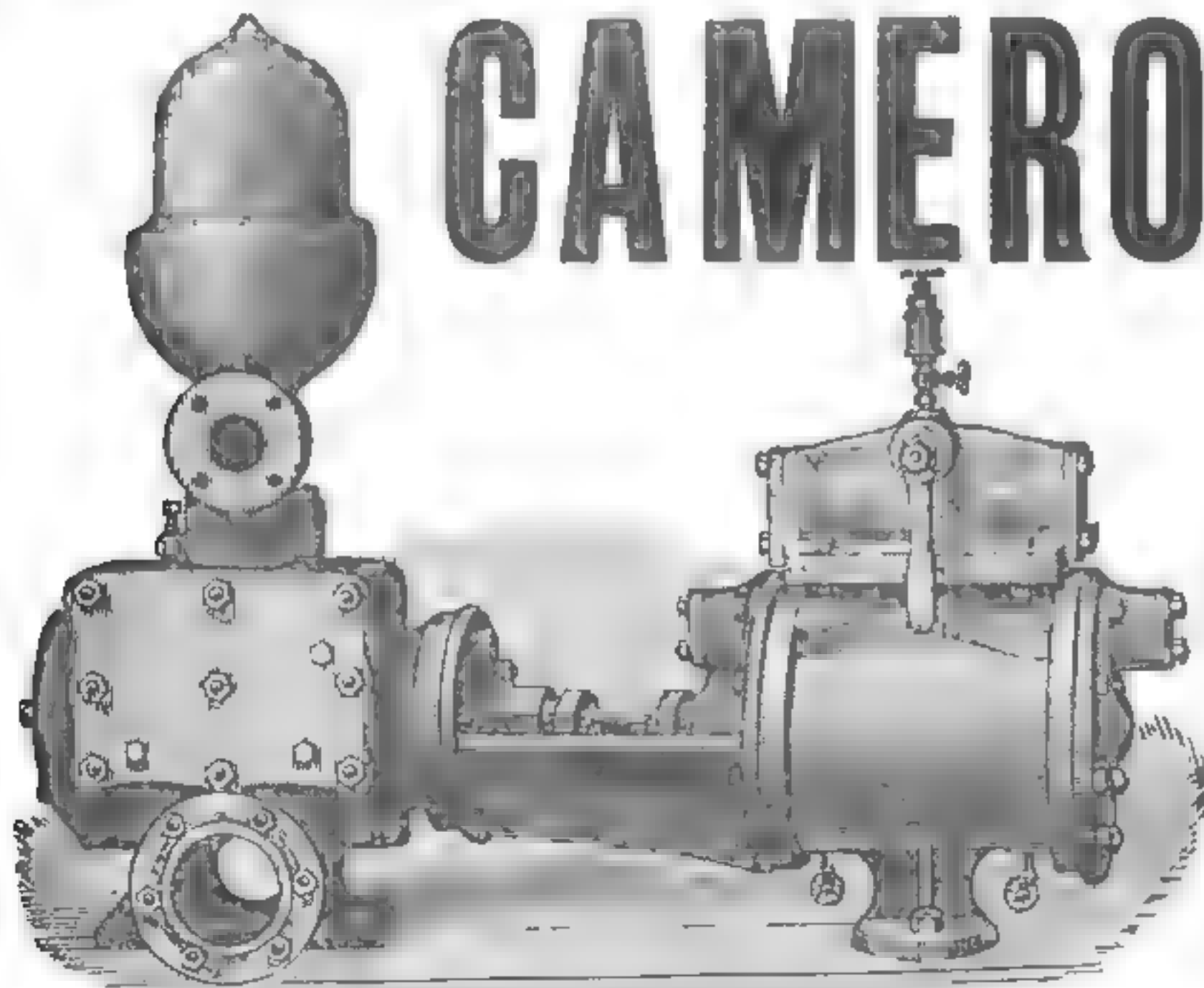
Exchange. Let us cole a halt before we carot too far.—*Another Exchange.* Such puns from idiotorial pens are enough to make a hog ruta-baga off the sidewalk and beet him with a stylus.—*Another Exchange.* A Kansas farmer has raised a hog which is nearly 7 feet from tip to tip. On the Chicago Board of Trade the noble animal would be classified as "long pork."—*Chicago Tribune.*

An important railroad decision was rendered in Pittsburgh, Pa., in September, by Judge Ewing in the Common Pleas court. L. D. B. Reese was expelled from a train on the Pennsylvania railroad because he refused to pay the 10 cents extra for cash fare, the money to be refunded at any office

of the company on presentation of receipt. The judge held that the 10 cents extra was wrong and so instructed the jury.

The farmers of the country are troubled over the question, "What are we to do with our wheat when all the good wheat growing territory is brought under cultivation?" They will be greatly surprised to learn that during the past ten years the increased percentage in our population far exceeds the percentage of increase in our wheat-growing area, and the accompanying fact, that if this proportionate increase continue it won't be many years before our whole product will be demanded for home consumption.—*Kansas City "Modern Miller."*

<p>COMPOUND Condensing or Non-Condensing. 16 SIZES, 5 to 500 H. P. Not yet equaled by any form of Engine for HIGH FUEL DUTY AND SIMPLICITY.</p> <p>STANDARD 13 Sizes in Stock. 5 to 250 H. P. 3000 in use in all parts of the Civilized World.</p> <p>JUNIOR 6 Sizes in Stock, 5 to 50 H. P. An Automatic Engine cheaper than a Slide Valve. WELL BUILT. ECONOMICAL. RELIABLE. Over 300 Sold the First Year.</p> <p>All the above built strictly to Gauge with INTERCHANGEABLE PARTS. REPAIRS CARRIED IN STOCK. SEND FOR ILLUSTRATED CATALOGUES.</p>	<p>WESTINGHOUSE ENGINES The Westinghouse Machine Co. PITTSBURGH, PA. U.S.A.</p>	<p>SELLING DEPARTMENT IN THE UNITED STATES.</p> <table border="0"> <tr> <td>New York,</td> <td>17 Cortlandt St.</td> <td rowspan="4">Westinghouse, Church, Kerr & Co.</td> </tr> <tr> <td>Boston,</td> <td>Hathaway Building,</td> </tr> <tr> <td>Pittsburgh,</td> <td>Westinghouse Build'g,</td> </tr> <tr> <td>Chicago,</td> <td>156, 158 Lake St.</td> </tr> <tr> <td>Philadelphia,</td> <td>608 Chestnut St.</td> <td>M. R. Muckle, Jr. & Co.</td> </tr> <tr> <td>St. Louis,</td> <td>302, 304 Washington Av.</td> <td rowspan="3">Fairbanks & Co.</td> </tr> <tr> <td>Kansas City,</td> <td>312 Union Avenue,</td> </tr> <tr> <td>Denver,</td> <td>1330 Seventeenth St.</td> </tr> <tr> <td>Omaha,</td> <td>1619 Capitol Avenue,</td> <td>F. C. Ayer.</td> </tr> <tr> <td>Pine Bluffs, Ark.</td> <td colspan="2">Geo. M. Dille & Sons.</td> </tr> <tr> <td>Salt Lake City,</td> <td>259 S. Main St.</td> <td>Utah & Montana</td> </tr> <tr> <td>Butte, Mont.</td> <td>Granite St.</td> <td>Machinery Co.</td> </tr> <tr> <td>San Francisco,</td> <td>21, 23 Fremont Street,</td> <td>Parke & Lacy Co.</td> </tr> <tr> <td>Portland, Or.</td> <td>33, 35 N. Front St.</td> <td>Parke & Lacy Mch. Co.</td> </tr> <tr> <td>Charlotte, N. C.</td> <td>36 College St.</td> <td rowspan="2">The D. A. Tompkins Co.</td> </tr> <tr> <td>Atlanta, Ga.</td> <td>45 S. Prior St.</td> </tr> <tr> <td>Dallas, Tex.</td> <td colspan="2">Keating Imp. & Machine Co.</td> </tr> <tr> <td>Chattanooga, Tenn.,</td> <td colspan="2">G. E. James & Co.</td> </tr> </table>	New York,	17 Cortlandt St.	Westinghouse, Church, Kerr & Co.	Boston,	Hathaway Building,	Pittsburgh,	Westinghouse Build'g,	Chicago,	156, 158 Lake St.	Philadelphia,	608 Chestnut St.	M. R. Muckle, Jr. & Co.	St. Louis,	302, 304 Washington Av.	Fairbanks & Co.	Kansas City,	312 Union Avenue,	Denver,	1330 Seventeenth St.	Omaha,	1619 Capitol Avenue,	F. C. Ayer.	Pine Bluffs, Ark.	Geo. M. Dille & Sons.		Salt Lake City,	259 S. Main St.	Utah & Montana	Butte, Mont.	Granite St.	Machinery Co.	San Francisco,	21, 23 Fremont Street,	Parke & Lacy Co.	Portland, Or.	33, 35 N. Front St.	Parke & Lacy Mch. Co.	Charlotte, N. C.	36 College St.	The D. A. Tompkins Co.	Atlanta, Ga.	45 S. Prior St.	Dallas, Tex.	Keating Imp. & Machine Co.		Chattanooga, Tenn.,	G. E. James & Co.	
New York,	17 Cortlandt St.	Westinghouse, Church, Kerr & Co.																																																
Boston,	Hathaway Building,																																																	
Pittsburgh,	Westinghouse Build'g,																																																	
Chicago,	156, 158 Lake St.																																																	
Philadelphia,	608 Chestnut St.	M. R. Muckle, Jr. & Co.																																																
St. Louis,	302, 304 Washington Av.	Fairbanks & Co.																																																
Kansas City,	312 Union Avenue,																																																	
Denver,	1330 Seventeenth St.																																																	
Omaha,	1619 Capitol Avenue,	F. C. Ayer.																																																
Pine Bluffs, Ark.	Geo. M. Dille & Sons.																																																	
Salt Lake City,	259 S. Main St.	Utah & Montana																																																
Butte, Mont.	Granite St.	Machinery Co.																																																
San Francisco,	21, 23 Fremont Street,	Parke & Lacy Co.																																																
Portland, Or.	33, 35 N. Front St.	Parke & Lacy Mch. Co.																																																
Charlotte, N. C.	36 College St.	The D. A. Tompkins Co.																																																
Atlanta, Ga.	45 S. Prior St.																																																	
Dallas, Tex.	Keating Imp. & Machine Co.																																																	
Chattanooga, Tenn.,	G. E. James & Co.																																																	



CAMERON STEAM PUMP

THE STANDARD OF EXCELLENCE.

SIMPLE! COMPACT! DURABLE!

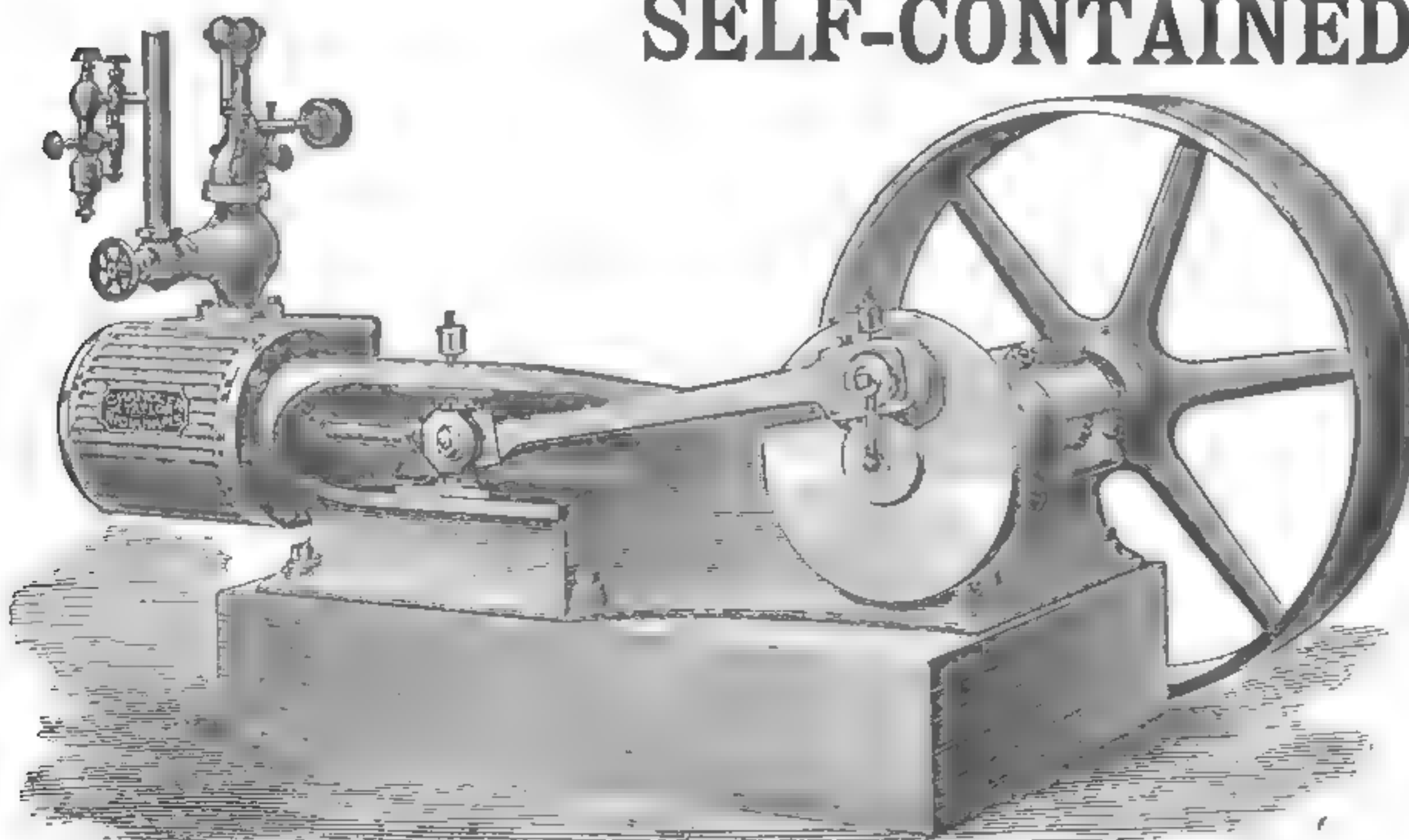
"NO OUTSIDE VALVE GEAR."

Steam, Air & Vacuum Pumps in Every Variety

FOR ILLUSTRATED CATALOGUE ADDRESS

THE A.S. CAMERON STEAM PUMP WORKS

Foot of East 23d Street, - New York.



SELF-CONTAINED STEAM ENGINES

Stationary or
Semi-Portable.

High Standard Maintained.
Prices Greatly Reduced.

WRITE FOR NEW ILLUSTRATED
CATALOGUE NO. 32.

Chandler & Taylor Co.

Indianapolis, Ind.

Engines, Saw-Mills and Drain Tile
Machinery a Specialty.



J. P. Adams, Marion, La., builds a grist-mill.
 J. Good, Sparta, N. C., will build a flour-mill.
 C. C. Hagenmeyer, Butler, Ky., added new rolls.
 A. & L. Cubbedge, Guyton, Ga., start a grist-mill.
 Jas. Connelly's flour-mill, Fayetteville, O., burned.
 Parrish & Moore, Dresden, Tenn., start a corn-mill.
 S. Wile, Graysville, Ga., builds a corn and flour-mill.
 A. K. Lair, Georgetown, Ky., improved his flour-mill.
 W. E. Merkley, Lebanon, Ky., improved his flour-mill.
 L. Wetzel, Paynes, Ky., put in new milling machinery.
 C. W. Carter, Hope Mills, Va., improved his flour-mill.
 John R. Phipps, Hartford, Ky., improved his flour-mill.
 J. H. Schultz, Mt. Pleasant, S. C., has built a grist-mill.
 D. A. Grounds, Guernsey, Ark., improved his grist-mill.
 Jas. Sherry's grist-mill, Eufaula, Ala., burned; rebuilds.
 Pendleton Bros., Fort Payne, Ala., will build a grist-mill.
 Wm. H. Zumbun, miller, McKinstrey's Mills, Md., is dead.
 The Petersburg, Ky., Milling Co., add corn-mill machinery.
 Hutchinson & Carder, Corinth, Ky., improve their flour-mill.
 J. A. McWilliams, Tuscumbia, Ala., improved his flour-mill.
 L. P. Henkel, New Market, Va., put in new flouring machines.
 W. T. G. Snyder, Sands, Va., has built a 50-barrel roller flour-mill.
 The Emonson Mercantile & Mfg. Co.'s grist-mill, Carlisle Ark., burned.
 W. T. Cox, Howardville, Md., has rebuilt his recently burned flouring-mill.
 H. H. Cocanougher, Texas, Ky., has built a 30-barrel roller flouring-mill.
 R. L. Frazee's flouring-mill and other property, Frazee City, Mich., burned.
 J. C. Bayne & Bros., Bagdad, Ky., double the capacity of their flouring-mill.
 J. W. Cline & Co., Weir's Cave, Va., are building a 50-barrel roller flour-mill.
 Wm. Kirk, Parkersburg, W. Va., starts a corn and feed mill; he wants machinery.
 Clack & Curtis, millers, Spokane Falls, Wash., are succeeded by Burns & Chapman.
 J. F. McClure, Rome, Ga., has bought the McWilliams flour-mill and will remodel it to rolls.
 W. D. Sharp & Co., Sharpsville, Ky., are putting roller machinery with 40-barrel capacity.
 Pallanch & Schaubel's flouring-mill, Holding's Ford, Minn., burned; loss \$9,200; no insurance.
 R. W. Davis's grain-elevator, Sun Prairie, Wis., burned with contents; loss \$9,000; insurance \$2,000.
 H. L. Treendle's grist-mill, Dixie, Ark., burned with other property; loss \$10,000; fire incendiary.
 Scott, Dempster & Co., Knoxville, Tenn., are spending \$25,000 in enlarging their flouring-mill.
 Wheat threshing in Douglas county, Minnesota, show yields of 27½ bushels and more to the acre.
 Carder & Vallandingham, Williamstown, Ky., will remodel their flouring-mill to the roller system.
 U. C. Darby, Weverton, Md., improves his flour-mill and increases its capacity from 50 to 75 barrels a day.
 W. P. Rondabush & Son, Harrisonburg, Va., have increased their flour-mill capacity to 40 barrels daily.
 The American Mill Co., Nashville, Tenn., will spend \$200,000 in improving their flouring-mill, with a daily capacity of 4,500 barrels, and in building a 400,000-bushel grain elevator. The work is now under way.

The Farmers' Alliance, Decherd, Tenn., propose to build a flouring-mill, at either Decherd or Winchester.

Moodey & Co.'s flour warehouse, Painesville, O., burned; loss \$5,000; insurance \$1,000; origin of fire mysterious.

T. B. Wood, Fort Worth, Tex., proposes to start an oatmeal and cracked-wheat mill. Machinery will be wanted.

W. H. Crank and others, Houston, Tex., have formed a \$25,000 stock company to manufacture the Tyler flour and meal receptacle.

The National Pulley Covering Co., of Baltimore, Md., have just received their seventh order for their covering from Marburg Bros. of that city. Their first order, placed about two years ago, rendered unnecessary the entire overhauling of their factory at a large expense and proved of such advantage to them that they are now using it in every possible place. While the business of this company naturally is larger when trouble is caused from slipping belts, the use of their covering on any pulley will increase its speed from 10 to 25 per cent.

Says the St. Louis, Mo., *Post-Dispatch* of October 14: Several days ago McDonald gave it as his opinion that the crop would be nearer 580,000,000 bushels than 480,000,000 bushels. To-day it is given out that Inglis, who is now in Missouri or Kansas, estimates the crop at 535,000,000 bushels. Inglis and McDonald are about the only men claiming to be crop experts who really deserve the name. They are good judges of condition and do not feel under the necessity of making their figures agree with official estimates, local or national.

State Commissioner Haggerty presents the following crop statistics of the two Dakotas for 1889 to show why those two new states should boom:

NORTH DAKOTA.		
	Acres.	Bushels.
Wheat.....	2,665,994	26,721,660
Oats.....	450,563	9,746,693
Corn.....	30,022	1,000,175
Barley.....	3,167	45,487
Buckwheat.....	205	2,897
Potatoes.....	16,119	1,401,130
Flax.....	57,511	495,202

SOUTH DAKOTA.		
	Acres.	Bushels.
Wheat.....	2,031,726	17,287,482
Oats.....	671,839	11,623,615
Corn.....	784,655	21,831,898
Barley.....	127,338	1,695,875
Rye.....	16,587	255,620
Buckwheat.....	2,228	29,667
Potatoes.....	29,537	2,637,182
Flax.....	345,803	2,795,913

Says the Buffalo News of October 11: The long-drawn-out and much-talked-of fight between Schoellkopf & Mathews, A. R. James and A. P. Wright & Son is settled as far as the Merchants' Exchange is concerned. At the meeting of the trustees of that institution yesterday it was finally decided that they had no jurisdiction to discipline Schoellkopf & Mathews and A. R. James for violating the laws of the Exchange. The case has dragged along for months and has been fought by both parties. It will be remembered that last spring Messrs. Schoellkopf & Mathews and A. R. James concluded to buy 610,000 bushels of wheat held in Chicago, with a view of keeping up the standard of their brands. They claim that A. P. Wright & Son offered to purchase the wheat without charging a commission, the Wrights thinking that the deal would influence the market through which they could operate profitably on their own account. The brokers were directed to buy the wheat at 5½ cents over the May selling price. After the deal was concluded Messrs. Schoellkopf & Mathews and Mr. James claim that they discovered that the wheat was bought for five cents over the May price and that the Wrights kept the half cent they made on the bushel, which amounted to \$3,000. Then a dispute arose. The buyers of the grain wanted the \$3,000; the Wrights refused to give it up. It was referred to the reference committee of the Merchants' Exchange and decided in favor of the brokers. Then the millers carried the matter to the courts. The Wrights then asked the trustees to expel Messrs. Schoellkopf & Mathews and A. R. James on the ground of violating the rules of the Exchange in carrying the matter to the courts. It ended yesterday in the acquittal of the millers.



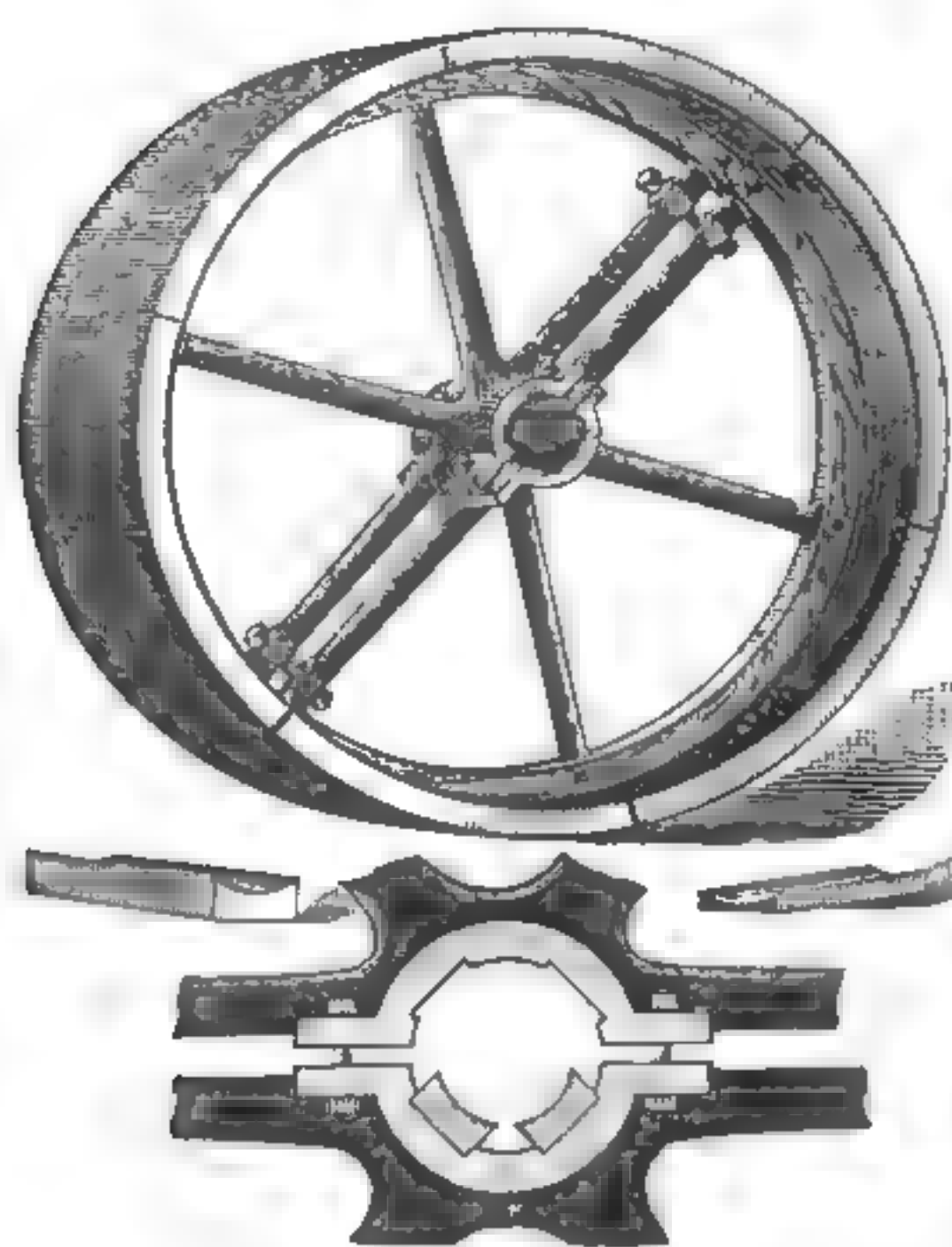
W.A. BINGHAM,
 MANUFACTURER OF
FLOUR SACKS.
 178 Duane Street,
 New York.



THE BEST ARE THE CHEAPEST.

THE PATRONAGE of the MILLING TRADE is MOST RESPECTFULLY SOLICITED.

MILLERS' FLOUR SACKS A SPECIALTY.



BIRD & CRANE MFG. CO., KALAMAZOO MICH.

MANUFACTURERS OF PATENT

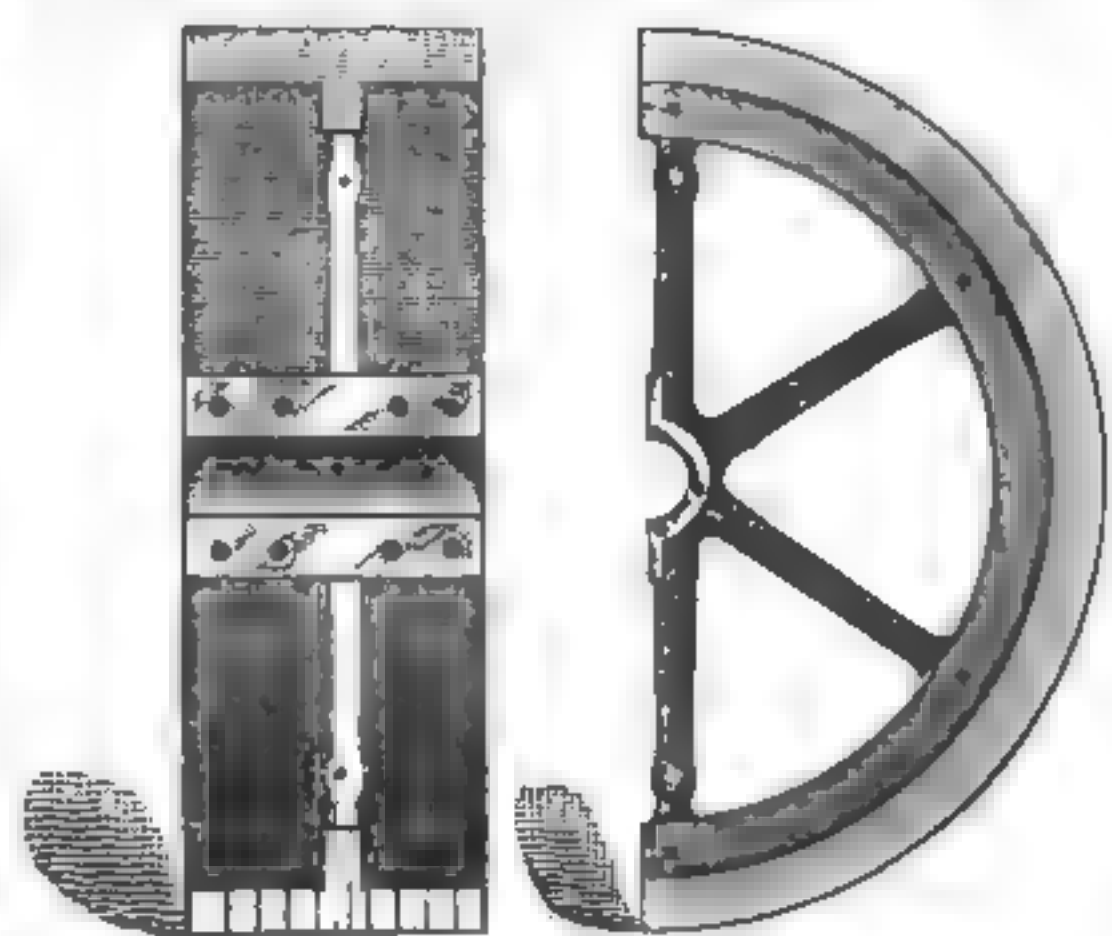
Wood Split Pulleys

WOOD RIM WITH IRON ARMS.

The Best Pulley on Earth!

Is very easily and quickly adjusted to Shaft. Has Patent Iron Bushings Interchangeable, to Fit Different Diameters of Shafts. Has FOUR or SIX Bearings on Shaft. This fastening never slips. Every Pulley strongly built and perfectly balanced.

SEND FOR CATALOGUE AND PRICE LIST.



THE LADIES FAVORITE
THE LIGHT RUNNING
NEW HOME
THE SEWING MACHINE THE BEST
THE FINEST WOODWORK ATTACHMENTS
NEW HOME SEWING MACHINE - GRANT - MALL
CHICAGO, ILL. 28 UNION SQUARE, N.Y. SAN FRANCISCO, CAL.
ATLANTA, GA. ST. LOUIS, MO. FOR SALE BY DALLAS, TEX.
N. BUSSENDORFFER.

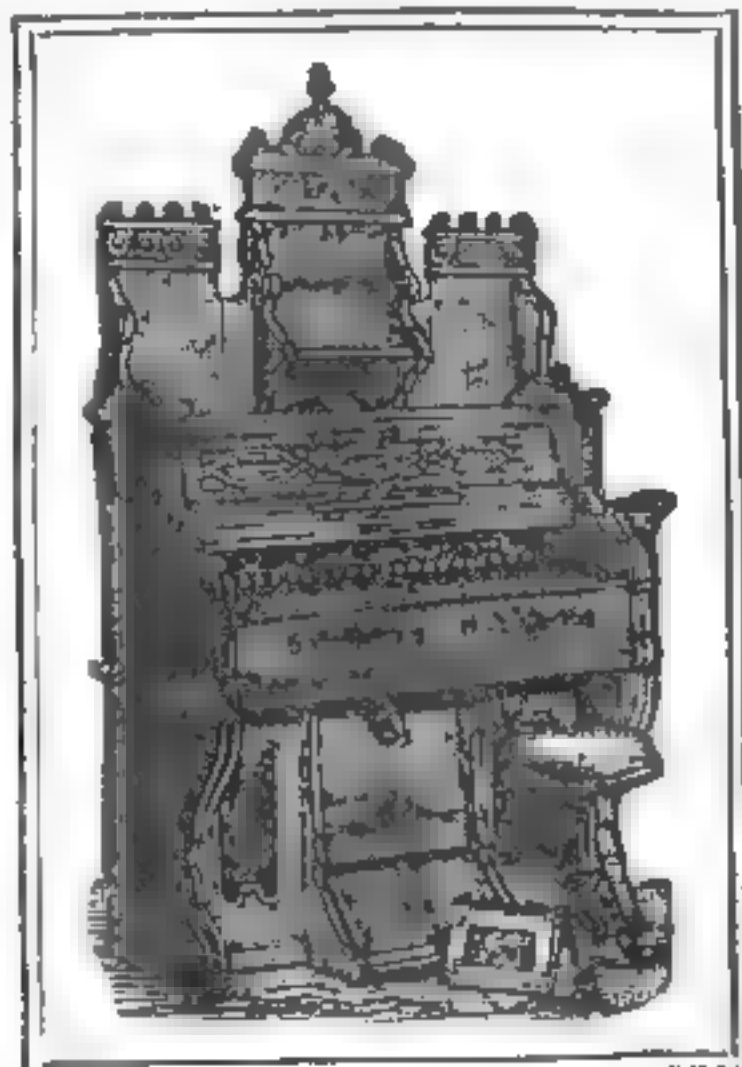
WOOD ENGRAVING LITHOGRAPHY
THE DONNELL CO.

The Cincinnati Corrugating Co.

SHIPPER'S
CAN SAVE TIME
TROUBLE AND CASH
BY USING
BARLOW'S
PATENT MANIFOLD
SHIPPING
BLANKS. SEND FOR
SAMPLE SHEET AND PRICES
BARLOW BROS. GRAND RAPIDS, MICH.

The BEST PIANOS and ORGANS IN THE WORLD

Are manufactured and sold for the least money by



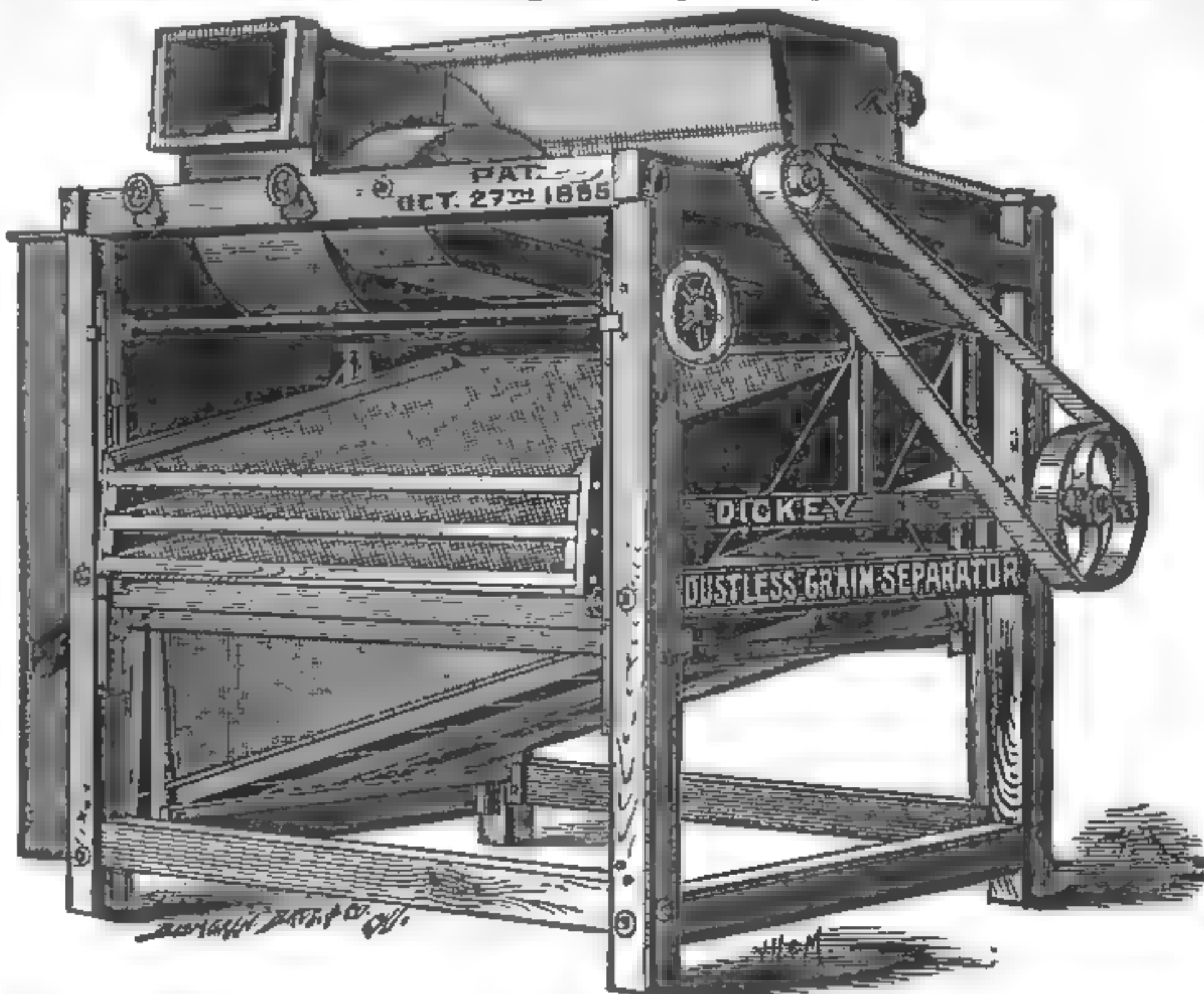
THE BEST ARE THE CHEAPEST.

Write us for Illustrated Catalogue, Free.

BEETHOVEN
PIANO ORGAN CO.
WASHINGTON WARREN CO., N.J.
RENTON THE PAPER

DICKEY DUSTLESS GRAIN AND FLAX SEPARATOR

This Separator is our latest and most perfect, and guaranteed to be the superior of any now on the market. This machine, as can be seen by the cut, is not a warehouse fanning mill with one patent attachment, but is a Dust Separator, made for the express purpose of thoroughly cleaning and separating all kinds of grain in large quantities; its construction is such that the working machinery and weight is all within the parts or anchors.



WE CLAIM FOR IT SUPERIORITY.

WE CLAIM FOR IT SUPERIORITY.

We claim for it Superiority over everything of the kind made, in simpleness, durability, saving of power, capacity and cost of construction. Its height will accommodate any number of spouts from different points, without moving machine. They have a capacity from 700 to 1,500 bushels per hour. We also control exclusively the manufacture of the celebrated Dickey Giant, End and Side Shake, Warehouse Mills, that have attained such a world-wide reputation. Sent on approval to any reliable party. For full particulars address,

A. P. DICKEY MANUFACTURING CO. Successors to **DICKEY & PEASE, RACINE, WIS.**

EUROPEAN ECHOES.

THE exports of wheat from Russia were 51,184,000 bushels in 1886, 76,527,000 bushels in 1887, and 86,404,000 bushels in 1888. There was no such increase in the crop as in the exports, but America's prices made Russia's opportunity. A pamphlet issued last April by the Russian Government proves by tabulated statement that in the growth of cereals the Russian cultivator is subject to a loss of from 15 cents to \$1.50 on each acre except when he devotes himself entirely to wheat.

BOLLAOK, SARASSIN & Co., of Paris, France, wrote under date of September 28: Speculating has for some time been suspended on account of the optimistic estimates of our crop. The result certainly was very satisfactory, but not so heavy as was at first reported, and we shall still have to import a certain quantity. Other European countries are generally in a worse position than we are, especially Russia, who will not be able to produce as much as last year. There is then only America left, and even there the quantity harvested was less than anticipated, while the quality of winter wheat is much below what was expected.

THE English Agricultural Department recently received from Galatz an interesting report on Roumanian agriculture, from which it is shown that Moldavian wheat has become a large article of exportation and begins to hold its own with that of other countries, the wheat of Upper Moldavia, especially in the districts bordering upon Russian territory, being of very fine quality. Hard wheat, it is stated, is little grown in Roumania, except in the Dobrogea, where the quality is somewhat inferior. This year's crop of wheat appears to be the best of all cereals, but it is not nearly so large as last year's, which was an exceptionally abundant one. The quality, though not equal on the average to last year's, is fairly good, there being some very fine as well as inferior lots. There still remains a very considerable supply of last year's crop in the country. It may be observed that 1,417,703 hundredweights of wheat, or about 330,000 quarters, were sent from Roumania to the United Kingdom in 1888, against 135,310 quarters in 1887.

SAYS the London "Millers' Gazette": Messrs. G. and W. J. Bates, of Winteringham, Lincolnshire, England, have been granted a patent in the United Kingdom for an improved grain-mixer, in which it is possible to mix grain in definite proportions previous to grinding or other treatment. The apparatus consists of a series of chambers placed side by side. Each chamber contains measuring devices which discharge the grain into a common shoot, in which is a conveyor, which mixes the different sorts of grain and delivers the mixture into a suitable receptacle. The grain is fed into the chamber through a shoot and is then taken up by the cups on a bucket-wheel and discharged by them into the trough. A wiper removes all surplus grain from the cups. The cups are pivoted and provided with a loaded stop, which causes them to assume the proper position for discharging at each rotation at the outlet. Some of the cups may be removed, or the wheels may be driven at different speeds to regulate the proportion of each sort of grain in the mixture.

SAYS the London "Mark Lane Express": "How is it that agricultural accounts from Canada require to be filtered down, not now and again only, but year after year? In later August the crops were telegraphed as 'magnificent,' and other adjectives of a like nature enlivened the cable service between the two countries. The returns which now reach us relate to acreage exclusively, but when wheat cultivation in Ontario is seen to have fallen from 1,537,000 acres to 1,220,000 acres, potatoes from 155,000 acres to 145,000 acres, and the advance in other crops to be exceedingly small, it is difficult to see how the agriculture of Canada generally can be regarded as matter for such satisfaction. The live-stock returns show that 1,900,000 cattle are now kept, against 1,930,000 a year ago; sheep 1,344,000 against 1,349,000. An increase of 16,000 in the number of pigs is a set-off against the

latter decline, and 21,000 more horses fairly balance the loss of 30,000 cattle. Still there is none of that exuberant progress which we are apt to connect with the very name of America."

SAYS the London "Miller" of September 30: Buyers are buying wheat when they can get it at former prices, and when they can not some of them are paying 6d. to 1s. advance. Those who have to make complaint of harvest results are multiplying, each casting a stone against the yield and giving it a bad name. Thus the opinion is pervading all the markets that first estimates overrated the wheat crop, and that the apprehensions of deficiency in the barley harvest have been fulfilled. There is some danger that views may become exaggerated on the side of deficiency, for many proved instances are now given of good yield and quality. Great irregularity is the only one true feature of the 1889 harvest. Australia, which at present is only sending a few steamer parcels of wheat, is expectant of a fair harvest this Christmas, as favorable rain and the progress of vegetation in the growing crops create good hopes of at least an average crop. Even thus early English millers have to look towards the Antipodes, as a good wheat harvest there means shipment of bulk in January and February and a supply here at a difficult time in the spring season. Belgium and Holland have had improved business at slightly improved rates. The Danube is sending this season useful samples of barley fit for malting at such low prices as 21s. to 28s. per quarter. The wheat supplies offered are far short of those forwarded last year. Germany has had firm markets recently. Holstein wheat 36s. to 40s. France works on its own wheat crop, neglecting imports, which are mostly dearer than farmers' supplies; prices keep steady. Flour 2s. 6d. per sack dearer a week ago has maintained the advance and sometimes increased it by 6d. Russia keeps on exhibiting strength over its surplus wheat. Most sorts are dearer to buy about 1s. per quarter. Recent shipments are much below those of last season at this period.

THIS IS NOT MILLING POETRY!

THE BULLBEARDAEMMERUNG.

The melancholy days have come,
They're rounding off the year,
The bulls are looking very glum,
The bears find little cheer.
Heaped in the elevators tall
The garnered wheat doth lie,
While Europe seems not short at all;
Low prices are too high!
Where are the bulls, the bellowing bulls,
Who lately pawed and stood
Upon their ears, like ornery fools,
A boom-price brotherhood?
And where the bears, the 'leven-pawed bears,
Who sought the depths below,
Who swore that wheat, on big-crop scares,
To 50 cents should go?
Alack! Alas! for bulls and bears,
That wheat should balky be,
That not from small or big crop scares
A nickel's change they see!
"Wheat is too high!" "Wheat is too low!"
Thus daily do they whoop,
And meantime bulls and bears both go
Kersplash into the soup!

Bang, Duluth, Minnesota, October, 1889.

TIME'S CHANGES.

In courting days we sometimes strolled
Within the gloaming fair,
And oft I stooped and gayly plucked
A flower from out her hair.
But now since wed I often look
With sadness on that hour,
As eating home-made bread I plucked
A hair from out the flour. *Cleveland Leader.*

PANCAKE POETRY.

The glowing autumn's varied tints
With silent joy we always greet,
Because its gilded glory hints
Of buckwheat cakes and sausage meat.
Utica Observer.

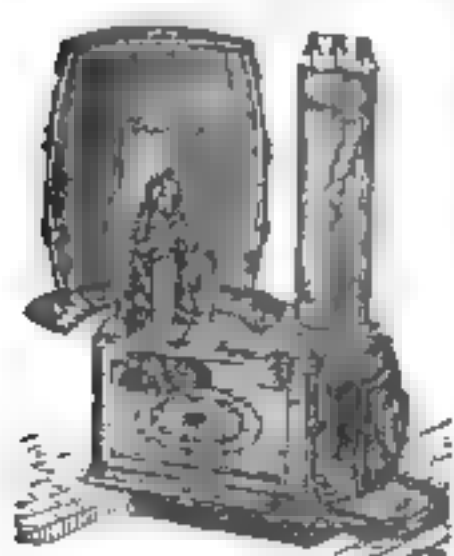
Lloyd & Sterrett

COR. 16TH AND STATE STREETS,
ERIE, - - PENN.

THIS SPACE BELONGS TO
LLOYD & STERRETT
ENGINES AND BOILERS,
ERIE, - - - - PENN.

Lloyd & Sterrett

COR. 16TH AND STATE STS.,
ERIE - - PENN.



**MOORE'S
PATENT
BARREL HEATER.**

For all kinds of coop-
erage. Thousands
in use in all parts of the
U. S. Send for Circular.

JOLIET STOVE WORKS JOLIET ILL.

PAYNE HIGH SPEED CORLISS ENGINE

SHAFT GOVERNOR COMBINED WITH CORLISS WRIST-PLATE.
ECONOMY OF FUEL.

REGULATION EQUAL TO ANYTHING IN USE.

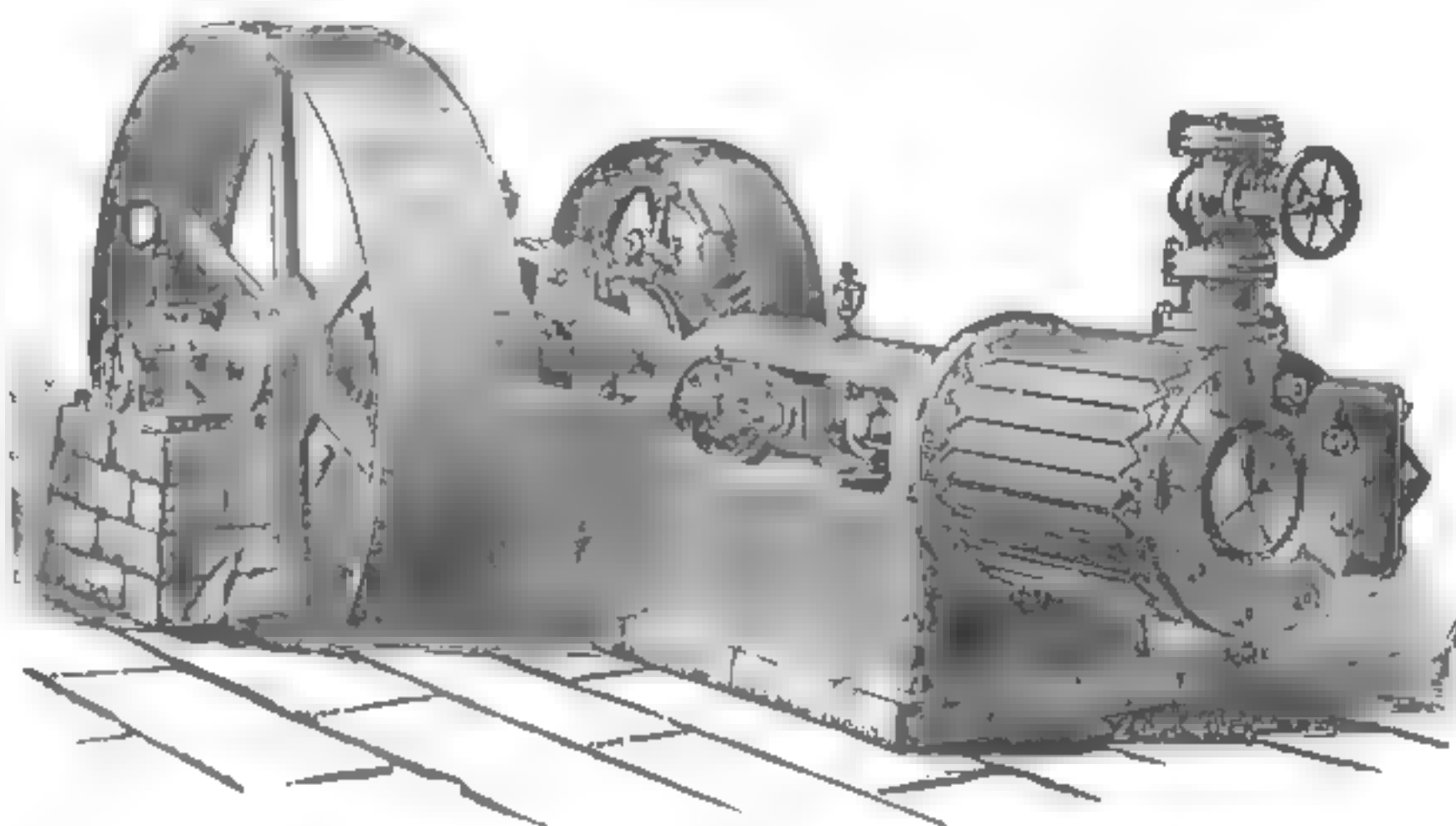
B. W. Payne & Sons,
ELMIRA, N. Y.



10 S. Canal Street,
CHICAGO, ILL.
45 Dey Street,
NEW YORK.
Hill, Clark & Co.
BOSTON, MASS.

AUTOMATIC ENGINES FROM 2 TO 200 HORSE POWER.

Economic Power Plants



Especially Adapted to Electric Lighting and
WOOD-WORKING ESTABLISHMENTS

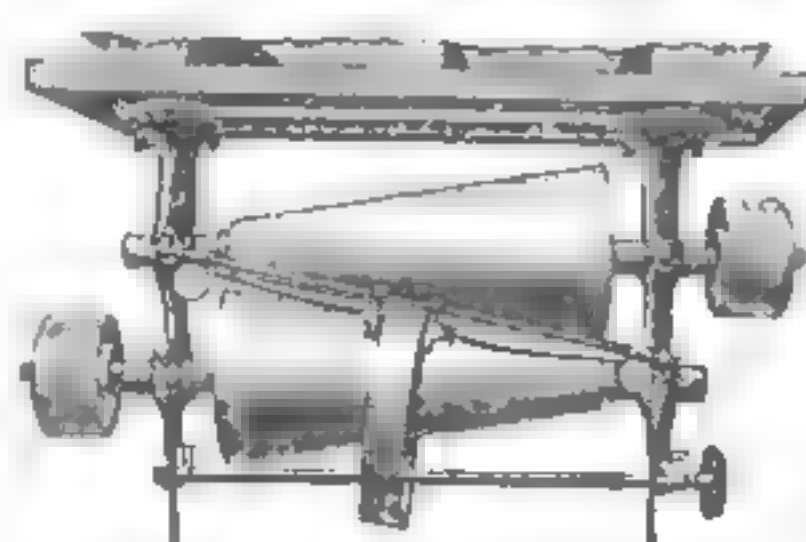
MANUFACTURED BY

VALLEY IRON WORKS, WILLIAMSPORT, PENN.

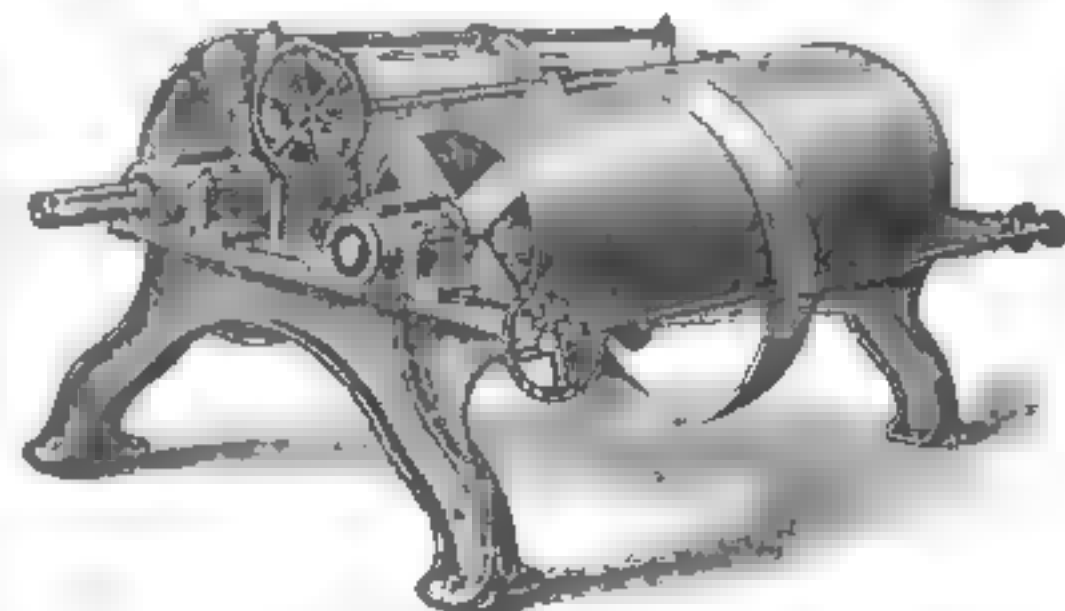
Please Send for Our New Catalogue and Mention "The Milling World."

THE EVANS FRICTION CONE & FRICTIONAL GEARING

"PATENTED."



This cut represents a set of hanging cone pulleys. This pattern is intended for that class of machinery that stops and starts at the same speed, and at the same time be able to change the speed more or less while running. These cones are also fitted with a governor where a steady motion is required and the initial power is



fluctuating. All sizes made from 1/2 Horse Power to 50 Horse Power. SEND FOR ILLUSTRATED CATALOGUE.

EVANS FRICTION CONE CO., 85 Water St., BOSTON.



KEEP YOUR BELTS FROM SLIPPING

And Save Your Power by Using FRICTION COVERING for Pulleys. Agents Wanted. Satisfaction Guaranteed- Easily Applied. No Rivets. Effective.

NATIONAL PULLEY COVERING CO., BALTIMORE, MD.



OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., Oct. 19, 1889.

Friday of last week brought heavy realizing in wheat, both in New York and Chicago, on the government report, and the whole list was weakened. October wheat opened at 86½c. and closed at 85½c. The government crop report placed the yield of wheat at 12.8 bushels, indicating a crop of 495,000,000 bushels, instead of the bull estimate of 465,000,000 and the government estimate of 475,000,000 a month ago. In New York the option sales reached 18,800,000 bushels. New York exports 15,377 bushels of wheat, 19,879 sacks and 4,732 barrels of wheat flour, 92,755 bushels of corn and 4,000 bushels of oats. October corn closed at 39¼c. and oats at 26¾c. Wheat flour was dull, but steady and unchanged. The minor lines were quiet and featureless.

Saturday brought easier and more active opening and stronger and steadier closing markets in wheat, with other staples following. October wheat in New York at 85c. and closed at 85½c. Options 7,000,000 bushels, Atlantic port exports 177,447 bushels, and receipts 233,359 bushels. October corn closed at 39¼c. in New York, with receipts 197,000 bushels, exports 141,250 bushels, and options 150,000 bushels. October oats closed at 25¼c., with receipts 115,800 bushels and sales very light. Wheat flour was dull, held at old prices and unsaleable without concessions. The Atlantic port receipts were 8,605 sacks and 39,592 barrels and exports 50 sacks and 23,953 barrels. The minor lines were featureless throughout.

Monday was a day of dullness. October wheat closed at 85½c. in New York, with receipts 215,220 bushels at Atlantic ports, exports 191,830, and 5,184,000 bushels. October corn ruled at 39¼c., with Atlantic port receipts 233,479 bushels, exports 197,000, and options 875,000 bushels. October oats closed at 25¼c., with Atlantic port receipts 276,864, exports 9,861, and options 200,000 bushels. Barley was in improved demand. Wheat flour was nominally unchanged, and trade was small. The minor lines were featureless. The visible supply in the United States and Canada was as follows:

	1889. Oct. 12.	1888. Oct. 13.	1887. Oct. 15.
Wheat.....	19,838,919	32,280,201	31,600,243
Corn.....	12,456,609	10,161,176	8,141,532
Oats.....	6,537,357	7,737,778	5,810,418
Rye.....	1,229,072	1,116,040	321,749
Barley.....	1,043,150	713,762	1,682,762

Tuesday brought weak and lower markets on an increase of over 2,000,000 bushels in the amount of wheat on passage. October wheat in New York closed at 84¼c., with Atlantic port receipts 174,703 bushels, exports 116,256, and options 6,000,000. October corn closed at 39¼c., with receipts 188,298 bushels, exports 184,803, and options 300,600. October oats closed at 25¼c., with receipts 186,605 bushels, exports 8,079, and options 350,000 bushels. Wheat flour was quiet and easier in some cases, but the change was hardly quotable. Atlantic port receipts included 13,018 sacks and 36,033 barrels, and exports 10,957 sacks and 1,170 barrels. The minor lines were quiet and featureless.

The following shows the amount of wheat and flour, together with the amount of corn on passage to the United Kingdom for ports of call or direct ports for the weeks mentioned:

	1889. Oct. 15.	1888. Oct. 16.
Wheat and flour, qrs....	1,609,000	2,371,000
Corn, qrs.....	359,000	274,000

The following shows the amount of wheat and corn on passage to the Continent for the past week and for the same week last year:

	1889. Oct. 15.	1888. Oct. 16.
Wheat, qrs.....	439,000	648,000
Corn, qrs.....	137,000	55,000

	Qrs.
Shipments India wheat to U. K.....	42,500
do do Continent..	25,000

The imports into the United Kingdom for the past week and for the same weeks in previous years were as follows:

	1889. Oct. 15.	1888. Oct. 16.	1887. Oct. 18.
Wheat, qrs.....	288,000	311,000	152,000
Corn, qrs.....	180,000	117,000	102,000
Flour, bbls.....	200,000	279,000	231,000

Wednesday was a day of dull and stronger wheat markets. October wheat closed at 84¼c., with Atlantic port receipts 614,822 bushels, exports 147,572 bushels, and options 5,000,000 bushels. October corn closed at 39c., with Atlantic port receipts 423,000 bushels and exports 97,000 bushels. October oats closed at 23¼c., with receipts 456,000 bushels and exports 11,660 bushels. Barley was slow and lower, with receipts 135,000 bushels. Buckwheat grain was 53c. Rye grain was nominally firm at 51½c., c.i.f., for No. 2 Western and spot delivered, 57½c. for No. 1 State in loads and 54½c. in carlots; and 48½c. for ungraded on track. Malt was neglected and easy at old prices. Mill-feed was dull at 65c. asked, with small sales. The quotations included 40-lb. at 65c., and at some mills 80-lb. at 65c. and 100-lb. at 85c.

Wheat flour was dull and easy, and concessions were made under competition to sell. The market was generally featureless. The quotations were as follows.

SPRING FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.60@1.75	\$....@....
Fine.....	1.95@2.20	2.10@2.35
Superfine.....	2.20@2.45	2.45@2.80
Extra No. 2.....	2.45@2.75	2.70@3.00
Extra No. 1.....	3.15@3.35	3.40@3.90
Clear.....	3.25@3.50	3.55@3.65
Straight.....	3.90@4.25	4.30@4.85
Patent.....	4.75@4.95	4.95@5.35

WINTER FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.75@2.00	\$....@....
Fine.....	2.20@2.50	2.30@2.60
Superfine.....	2.55@2.75	2.55@2.80
Extra No. 2.....	2.60@2.90	2.70@3.00
Extra No. 1.....	3.00@4.00	3.15@3.95
Clear.....	3.55@3.90	3.85@4.15
Straight.....	4.15@4.25	4.20@4.50
Patent.....	4.40@4.60	4.60@5.00

CITY MILLS.		
W. I grades.....	4.80@4.40	
Low grades.....	2.60@2.65	
Patents.....		

Rye flour was dull at prices ranging from \$2.80@3.20, and sales were small. Buckwheat flour was dull, weak and lower at 1.90@2.15 for good to fancy. Corn products were in fair demand, with Brandywine at \$2.70.

Thursday brought little change in the markets. October wheat closed at 84¼c., with New York receipts 83,650 bushels, export 32,640 bushels, spot sales 108,000 bushels, and options 5,928,000 bushels. October corn closed at 38¼c., with receipts 146,000 bushels, exports 136,833, spot sales 147,000 and options 656,000 bushels. October oats closed at 25c., with receipts 207,000 bushels, spot sales 178,000 and options 690,000. Wheat flour was heavy in New York, with receipts 26,635 packages and sales 17,100 barrels. Prices for the day included the following: Low extras \$2.50@2.90; city mills \$4.30@4.50; city mills patents \$4.90@6.00; winter wheat low grades \$2.50@2.90; fair to fancy \$3.10@4.65; patents \$4.25@5.25; Minnesota clear \$3.25@4.15; do straights \$3.85@5.00; do patents \$4.35@5.55; rye mixtures \$3.25@4.00; superfine \$2.10@2.85. The minor lines were featureless.

Ohio's crops for 1889 include 37,381,000 bushels of wheat, 35,400,000 bushels of oats and 763,000 bushels of barley.

BUFFALO MARKETS.

WHEAT—Spring wheat was in good demand at firm prices. No. 1 hard sold at 93½c, No. 1 Northern at 88½c, No. 2 Northern at 86c. Red winter sold at 85½c for No. 2 and was weak. No. 3 ranged from 79½c to 81½c. White sold at 85½c for No. 2 and No. 1. **CORN**—The market is dull. No. 2 yellow sold at 36½c for No. 2, and some No. 3 at 36c. Track lots were ¾c higher. **OATS**—Trade is quiet. Some No. 2 mixed on track sold at 26¼c, No. 2 White was held at the same, and No. 3 at 25½c. **BARLEY**—A light demand is reported, and sales are few, at 55½c for the whole range; mostly at 60½c. **RYE**—There was no trade of any moment. No. 2 is held at 47½c on track. **OATMEAL**—Akron, \$6.00; Western, \$5.75 per bbl; rolled oats, in cases, 72 lbs, \$3.25. **CORNMEAL**—Coarse, 80½c; fine, 85½c; granulated, \$1.60 per cwt. **MILLFEED**—City ground coarse winter, \$12.00@12.50; fine winter, \$12.00@12.50; finished, \$14.00@14.50 per ton; coarse spring, 11.50@12.00; fine spring, \$11.50@12.00.

1831 THE CULTIVATOR 1890 AND Country Gentleman

THE BEST OF THE AGRICULTURAL WEEKLIES

DEVOTED TO
*Farm Crops and Processes,
Horticulture and Fruit-Growing,
Live-Stock and Dairying.*

While it also includes all minor departments of Rural interest, such as the Poultry Yard, Entomology, Bee-Keeping, Greenhouse and Grapery, Veterinary Replies, Farm Questions and Answers, Fireside Reading, Domestic Economy, and a summary of the News of the Week. Its MARKET REPORTS are unusually complete, and much attention is paid to the Prospects of the Crops, as throwing light upon one of the most important of all questions—*When to Buy and When to Sell*. It is liberally illustrated, and by RECENT ENLARGEMENT, contains more reading matter than ever before. The Subscription Price is \$2.50 per year, but we offer a SPECIAL REDUCTION in our

CLUB RATES FOR 1890!

Two Subscriptions, in one remittance, . . . \$4
Six Subscriptions, in one remittance, . . . 10
Twelve Subscriptions, in one remittance, . . . 18
To all New Subscribers for 1890, paying in advance now, we will send the PAPER WEEKLY, from our receipt of the remittance to January 1st, 1890, WITHOUT CHARGE.

SPECIMEN COPIES FREE. Address

LUTHER TUCKER & SON, Publishers
ALBANY, N. Y.



THE "HARLOW" Positive Feed Lubricators.

For Marine and Stationary Engines,
Steam Pumps, Electrical and
other Machinery.

MAXIMUM ECONOMY IN OIL.
MARKED ECONOMY IN FUEL.

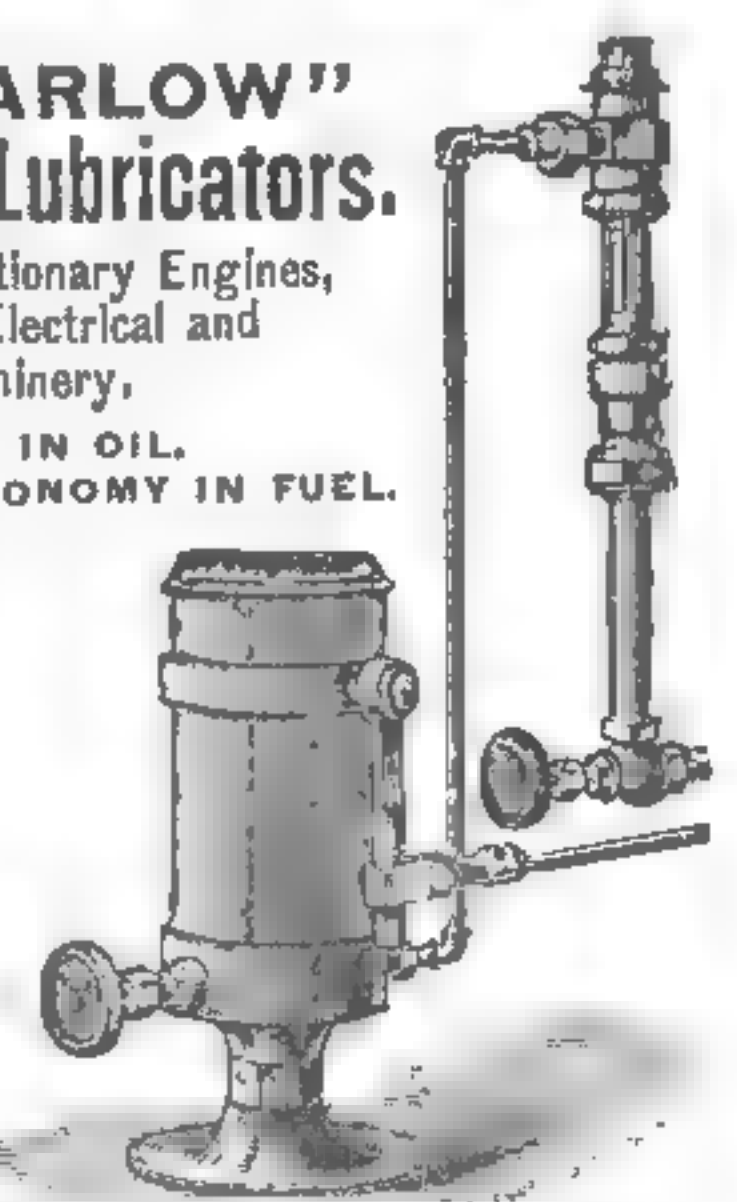
Not dependent upon or
operated by Steam
Pressure, Condensa-
tion or Gravity.

Not affected by changes
of temperature.

BEING operated by
some moving portion
of the engine or
machine to be lubri-
cated, the "Harlow
Lubricator" starts
and stops with the
engine or machine
being lubricated, without requiring the slightest atten-
tion from the engineer or operator, always delivering the
oil in any amount from a drop to a constant stream.

The cup can be filled at any moment while the engine
or machine being lubricated is in operation, without
causing any leakage either of oil or steam.

**Harlow Lubricator Mfg. Co. BOSTON, Mass.
U. S. A.**





RELIANCE OIL & GREASE CO., CLEVELAND, O.,

—MANUFACTURERS OF—

Finest Lubricants for Milling Plants. A Challenge to the World.

WRITE US.

"VALVE OLEINE"—675 Degrees Fire Test, Cylinder Oil.

"CHIEF"—Roller Mill Lubricant.

"NIAGARA"—Belt Grease.

"RUSSIAN"—Engine and Machine Oil.

"ANCHOR"—Roller Mill Grease.

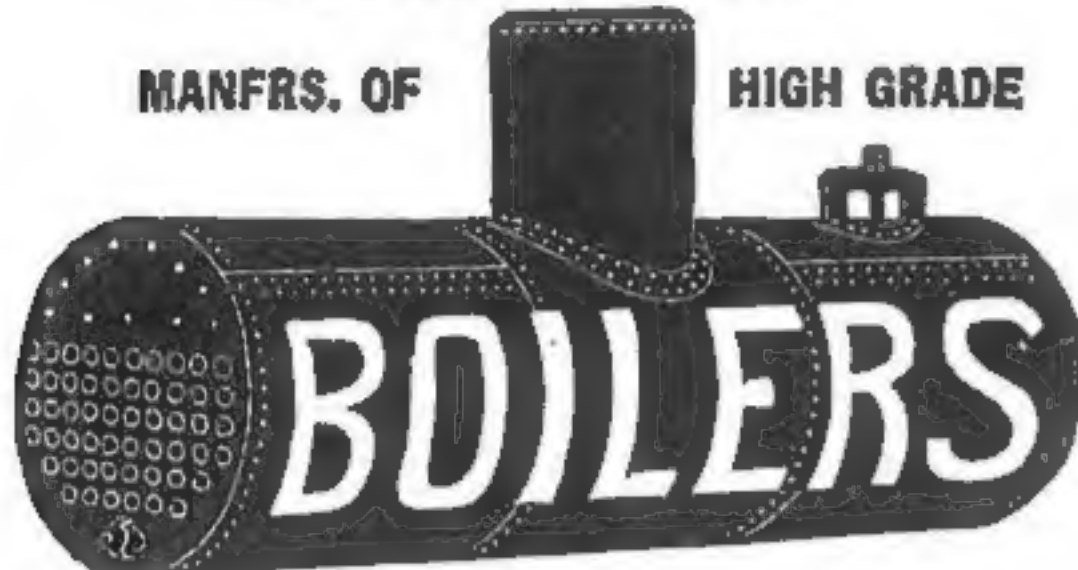
"CHELSEA"—Scale Solvent, Best on Market. Agents Wanted.

FREE—SAMPLES, CATALOGUE, AND ALL INFORMATION.

SPECIAL
HIGH GRADE
PRODUCTS

EAGLE IRON WORKS,
DETROIT, MICH.

MANFRS. OF HIGH GRADE



**HORIZONTAL, UPRIGHT
PORTABLE AND MARINE.**

Oil Tanks & Smoke Stacks,

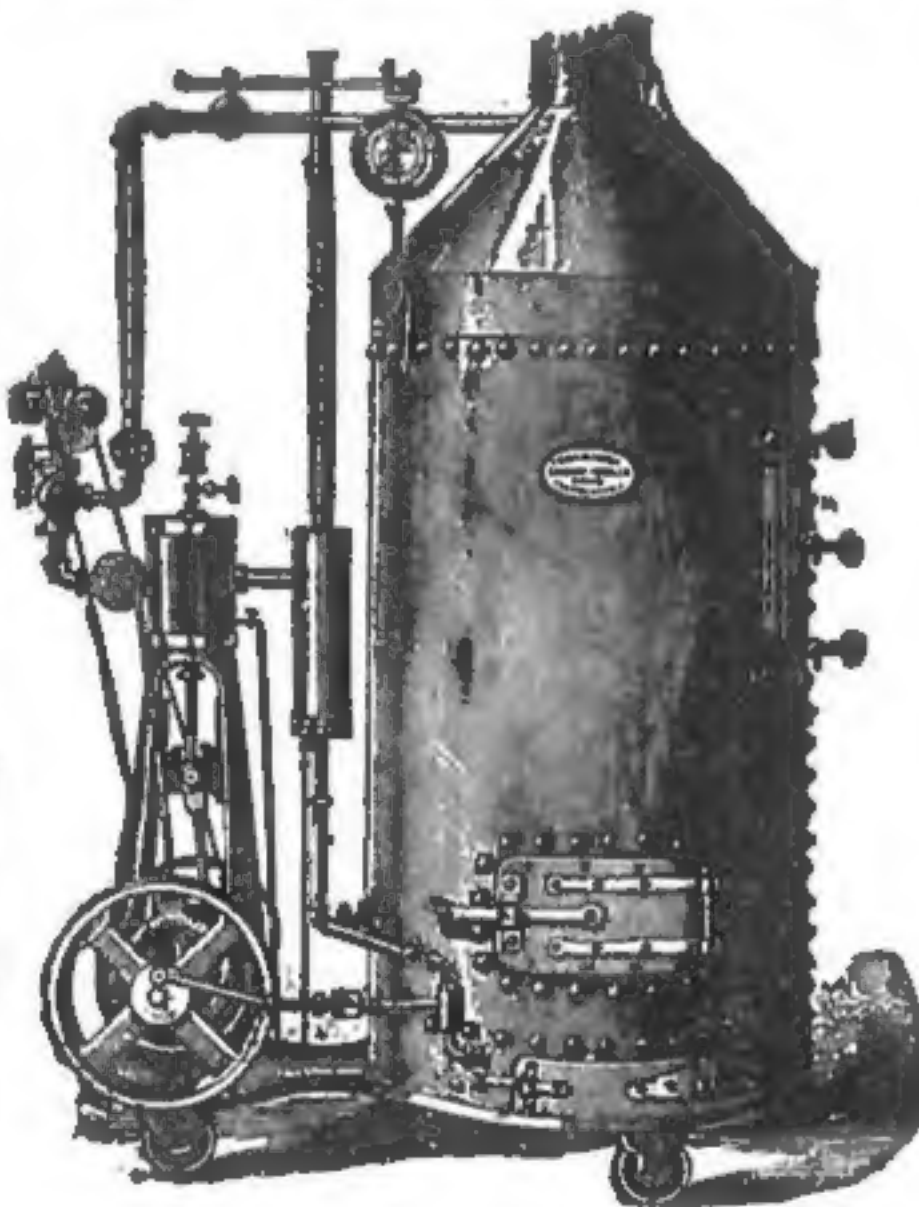
HEAVY SHEET IRON WORK.

CORRESPONDENCE SOLICITED.

**TONAWANDA
ENGINE AND BOILER WORKS**

A Large Assortment of Machinery.

The Best 6-Horse Power Semi-Portable Upright Engine and Boiler Made.



SPECIAL PRICE. GUARANTEED.

SEND FOR CATALOGUE.

ARMITAGE, HERSCHELL & CO.

Tonawanda N. Y.

New Improved Patent Head Linings.



DESCRIPTION.

These Linings are curved edgewise and flatwise, besides having the edge beveled, so as to make them fit the head and chine PERFECTLY, without springing them edgewise when nailing.

If you use them once you will have NO OTHER. No need of pounding fingers, as the ends do not have to be held down while nailing. They are much more convenient to nail and look better than any other. They are first tied in bundles of two hundred, and, when dry, are put into bales, weighing about fifty pounds each, and tied with two strong wires, to make them handle better and to prevent loosening out in transit. Write for prices and state about the number you use per year.

To convince you of their merit, and for the purpose of introducing them, I will ship a sample order of from five to ten thousand at a REDUCED RATE.

SEND US A TRIAL ORDER. SATISFACTION GUARANTEED.

J. H. PETERS,
Owner of Patent and Manufacturer,
COLEMAN, MICH.

"Cooper on Belting"

A Treatise on the Use of Belting for the Transmission of Power. With illustrations of approved and actual methods of arranging Main Driving and Quarter Twist Belts, and of Belt Fastenings. Examples and Rules in great number for exhibiting and calculating the size and driving power of belts. Plain, Particular and Practical Directions for the Treatment, Care and Management of Belts. Descriptions of many varieties of Beltings, together with chapters on the Transmission of Power by Ropes; by Iron and Wood Frictional Gearing; on the Strength of Belting Leather; and on the Experimental Investigations of Morin, Briggs, and others, for determining the Friction of Belts under different tensions, which are presented clearly and fully, with the text and tables unabridged. By JOHN H. COOPER, M. E. Second Edition. One vol., demi octavo. Cloth, \$3.50. Sent post-paid on receipt of price. Address,

McFAUL & NOLAN, BUFFALO, N. Y.

**THE STEVENS
PORTABLE MILLS**

For CORN and
FEED GRINDING

Genuine French
BUHR STONES

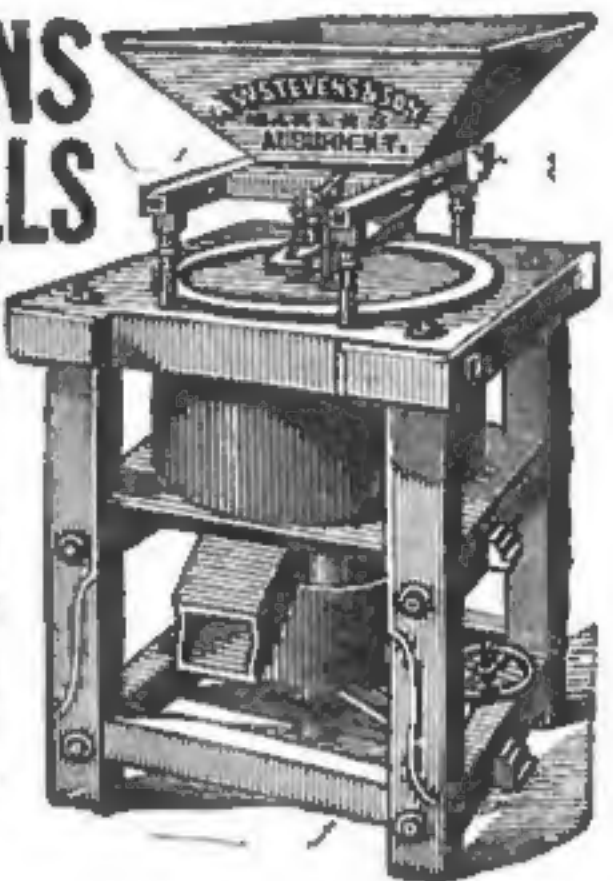
Power Corn Sheller

Prices Below the Lowest

A.W. STEVENS & SON

AUBURN, N. Y.

Mention this paper.



THIS WHEEL GIVES HIGH RESULTS, AND IS ACKNOWLEDGED THE BEST, MOST PRACTICAL AND EFFICIENT TURBINE MADE. FOR SIMPLICITY, DURABILITY, AND TIGHTNESS OF GATE IT HAS NO EQUAL.

State requirements and send for Catalogue to

T. C. ALCOTT & SON,

MOUNT HOLLY, N. J.

The LIPPOLD DUSTLESS CORN SHELLER & CLEANER

MANUFACTURED BY

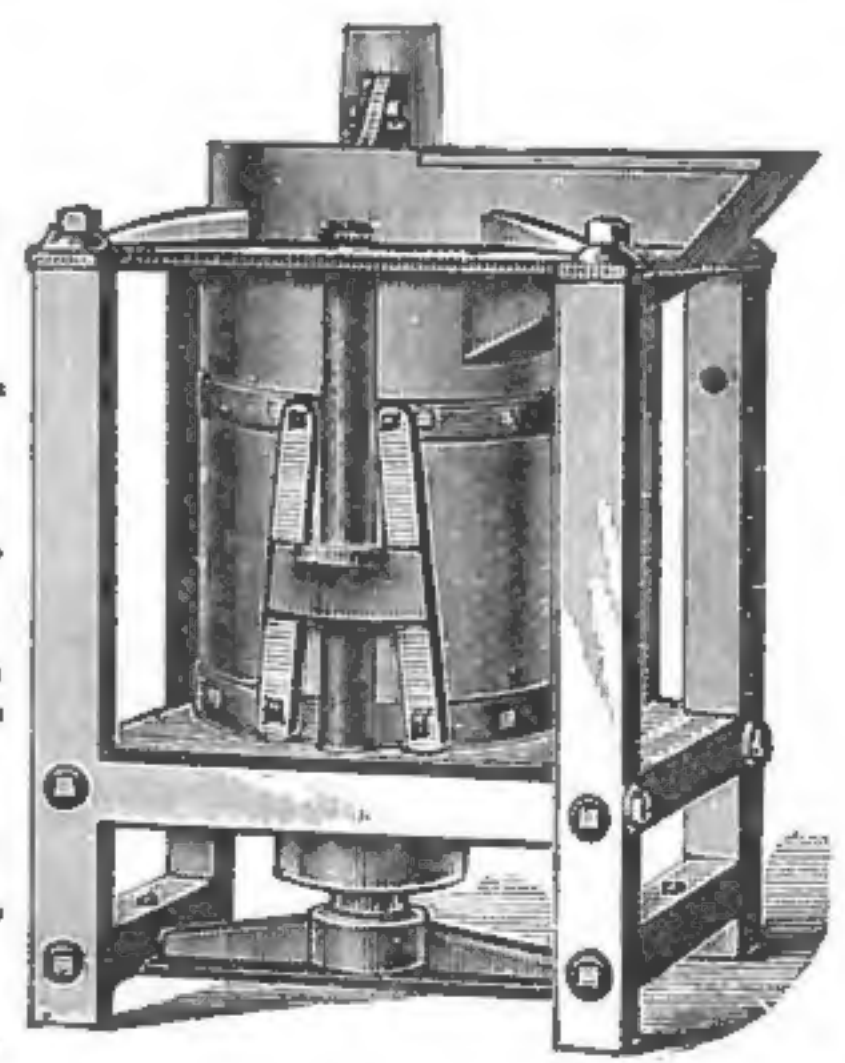
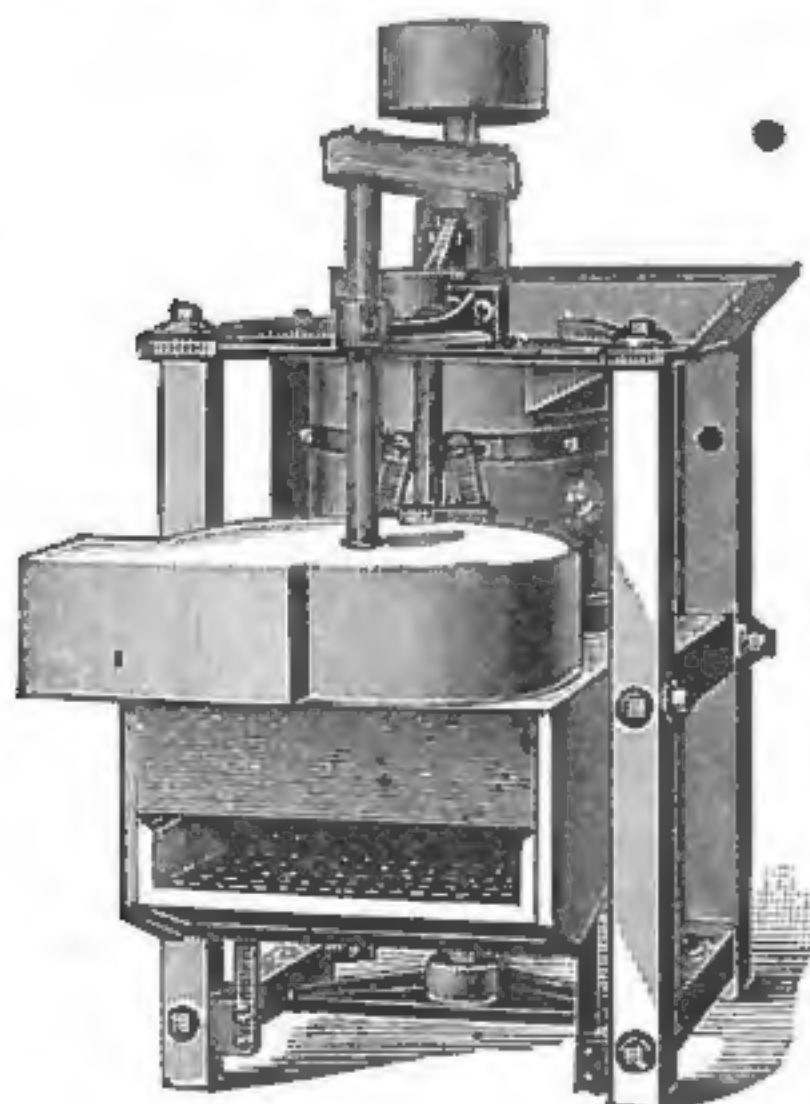
The LIPPOLD MFG. CO.
ERIE - - PENN.

THE HIGHEST CAPACITY for the LEAST MONEY.

The Best Machines for Mills and Elevators.

Machines Sent on Thirty Days' Trial.

SHELL UNHUSKED CORN AND CLEAN IT PERFECTLY.



WRITE FOR ILLUSTRATED CIRCULAR WITH PRICES.
NAME THIS PAPER.

INSURE IN THE TRADERS & TRAVELERS

Accident Company,
287 BROADWAY, NEW YORK.

BENEFITS.

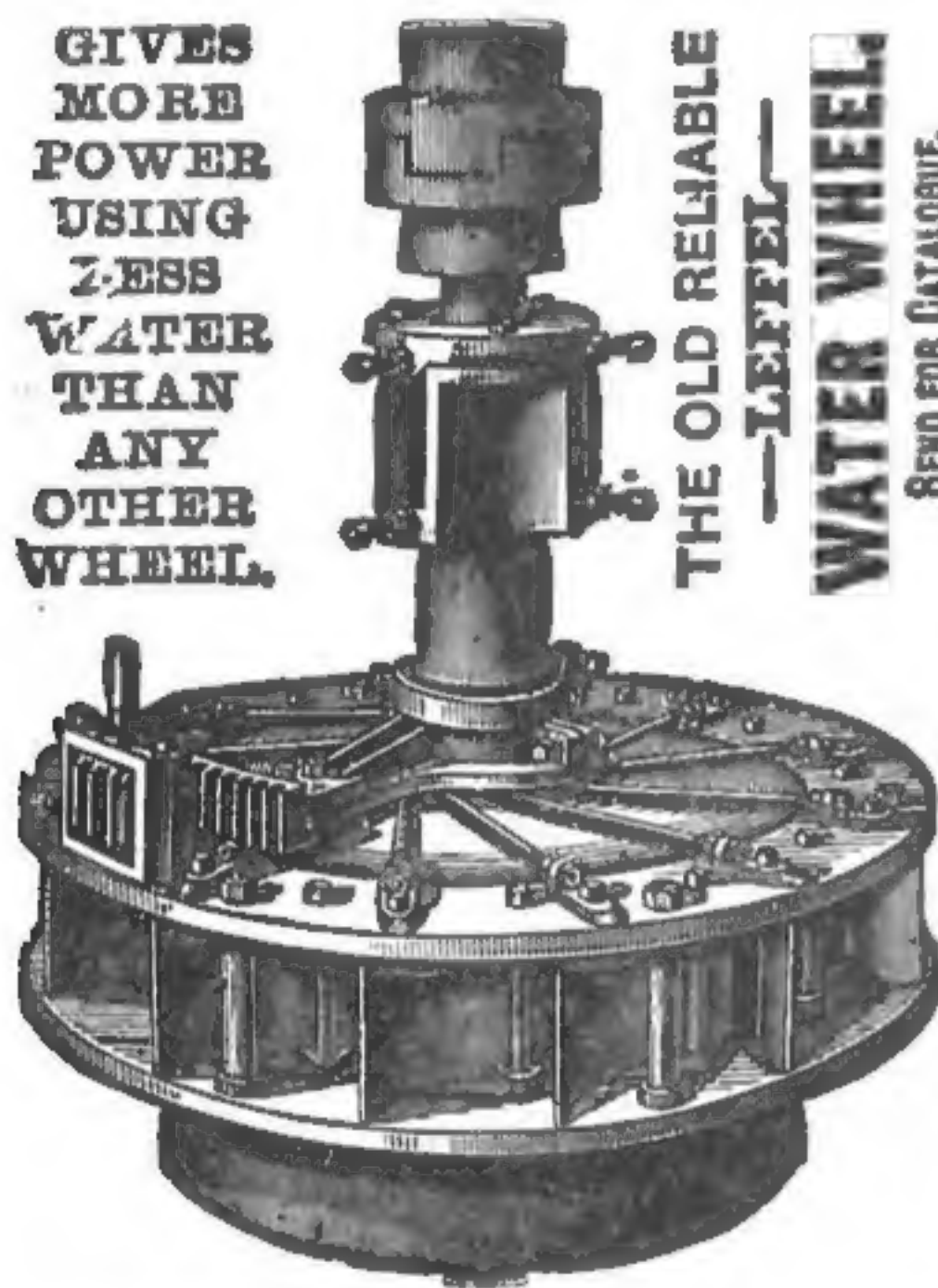
\$5,000 for Death.
\$5,000 Loss of Limbs.
\$2,500 Loss of Limb.
\$2,500 Loss of Sight.
\$1,250 Total Disability.
\$650 Loss of One Eye.
\$25 Weekly Indemnity for
26 Weeks.
One Set of Individual Registry Plates
Included.

COST.

Four Quarterly Payments, \$10.00
Annual Dues, - - - 1.00
Membership Fee, 5.00. \$11.00

IMPORTANT NOTICE.—The Traders & Travelers Accident Co. of New York desire the services of one responsible representative in each town to act as agent for the general transaction of their business. A liberal and permanent arrangement will be made with parties who can fill the above requirements. Address
C. S. SOMERVILLE, Sec'y.

GIVES
MORE
POWER
USING
LESS
WATER
THAN
ANY
OTHER
WHEEL.



THE OLD RELIABLE

WATER WHEEL

—LEFFEL—

JAMES LEFFEL & CO.
SEND FOR CATALOGUE.
SPRINGFIELD, O., OR 110 LIBERTY ST., N.Y.

PREJUDICE Investigate the merits of the Reliance Safety Water Columns. It pays to keep posted. Many of the largest corporations have found it profitable to discard the old appliances and adopt these safeguards. There is always economy in safety. Send for illustrated price-list.
Reliance Gauge Co., 831 Sheriff St., Cleveland, Ohio.

The D&C TO MACKINAC

SUMMER TOURS.

PALACE STEAMERS. LOW RATES.

Four Trips per Week Between
DETROIT, MACKINAC ISLAND
Potoskey, Sault Ste. Marie, and Lake
Huron Way Ports.

Every Week Day Between
DETROIT AND CLEVELAND
Special Sunday Trips during June, July, August and Sept.

Double Daily Line Between
CHICAGO AND ST. JOSEPH, MICH.

OUR ILLUSTRATED PAMPHLETS

Rates and Excursion Tickets will be furnished
by your Ticket Agent, or address
E. B. WHITCOMB, G. P. A., DETROIT, MICH.,
Detroit and Cleveland Steam Nav. Co.

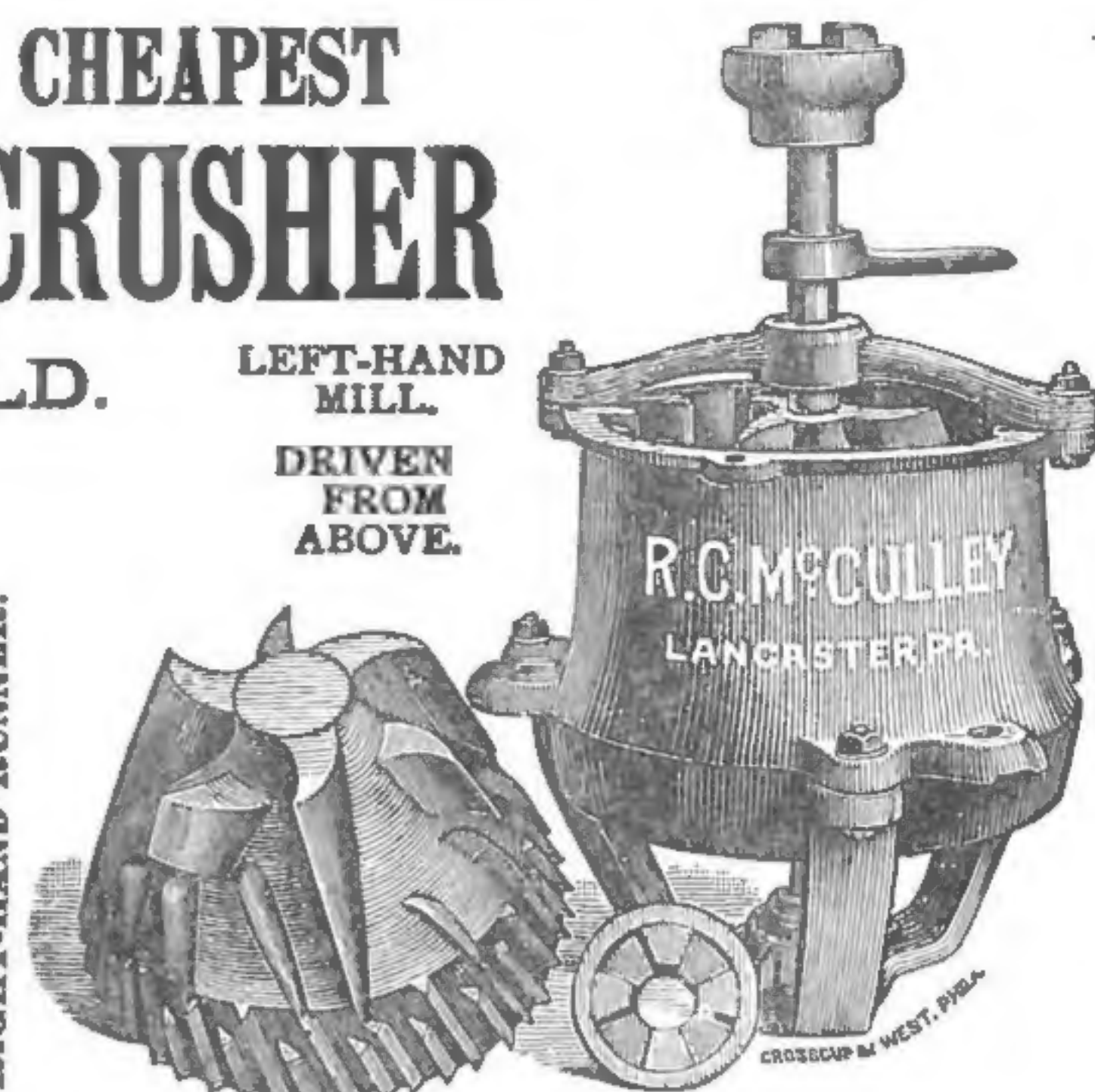
THE BEST AND CHEAPEST CORN AND COB CRUSHER

IN THE WORLD.

All wearing parts cast of a steel mixture. Notice difference in construction. Most area where most work is done, where all other crushers have least area where most work is done. Low priced machinery is not the cheapest, considering durability and efficiency. Sent on 30 days' trial when satisfactory reference is furnished.

Please Send for Circulars.

LEFT-HAND
MILL.
DRIVEN
FROM
ABOVE.



RIGHT-HAND RUNNER.

R. C. McCULLEY, LANCASTER, PENN.

\$15

WILL BUY THE BEST AND CHEAPEST CORN & COB CRUSHER

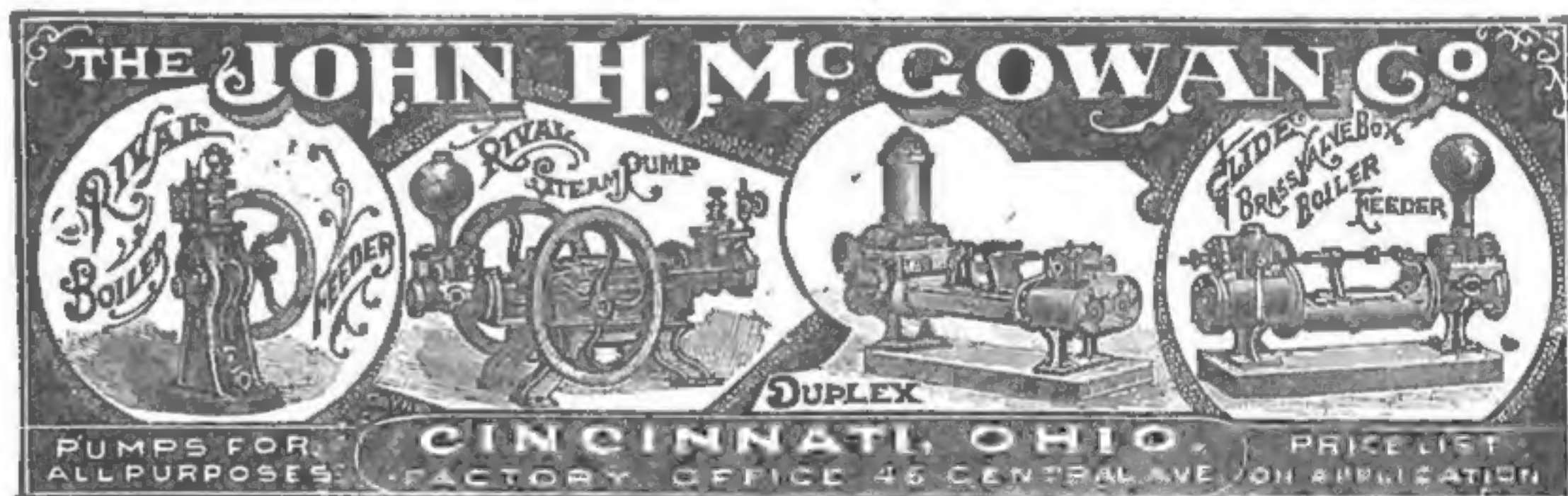
IN THE WORLD.



Our crushers are made of a "special quality" of material that insures years of service. Thousands of these crushers are in use throughout the United States and Canada. Send for circular, giving testimonials from millers who are using them, and know a good thing when they see it.

T. B. WOOD'S SONS, CHAMBERSBURG, PA.

Manufacturers of
Shafting, Pulleys, Hangers, Mill Gearing, Etc.



BRANCH HOUSE, 1425 EAST MAIN STREET, RICHMOND, VA.



BEST STEEL SAFETY MADE FOR

\$35

Easiest LADIES' Tricycle Known

Our Tricycle the Only Machine ever Recommended by Physicians for Ladies and Girls of a Delicate Constitution.

THE BUFFALO TRICYCLE CO.

Manufacturers of Ladies' and Girls' Tricycles, Ladies' and Boys' Safety Bicycles, Etc., Etc.

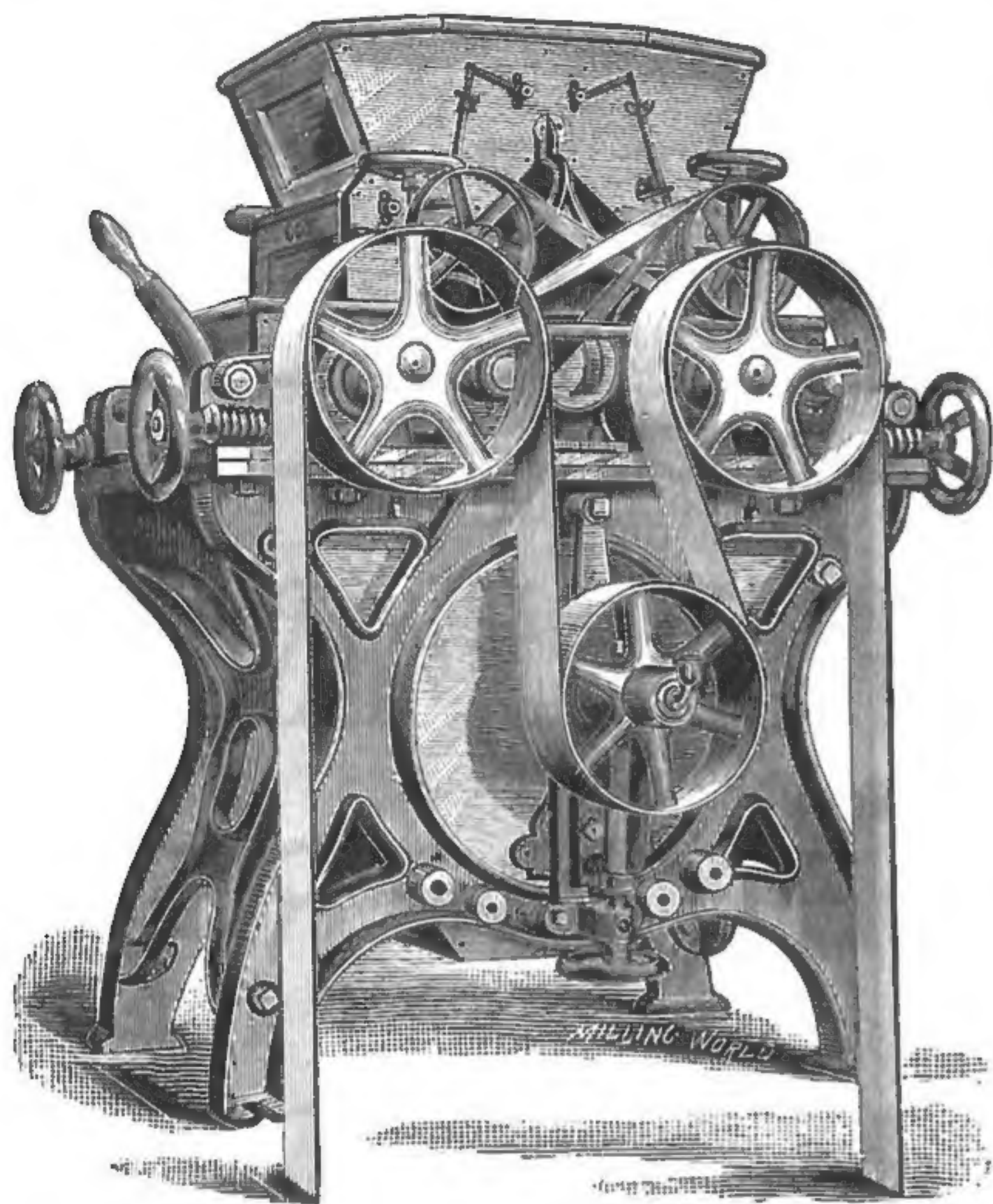
640 Linwood Ave., BUFFALO, N. Y.

SEND FOR CATALOGUE AND PRICES.



PARTIES WILL PLEASE MENTION THIS PAPER
WHEN WRITING TO ADVERTISERS.

JOHN HUTCHISON MFG. CO., Mill Builders and Mill Furnishers.



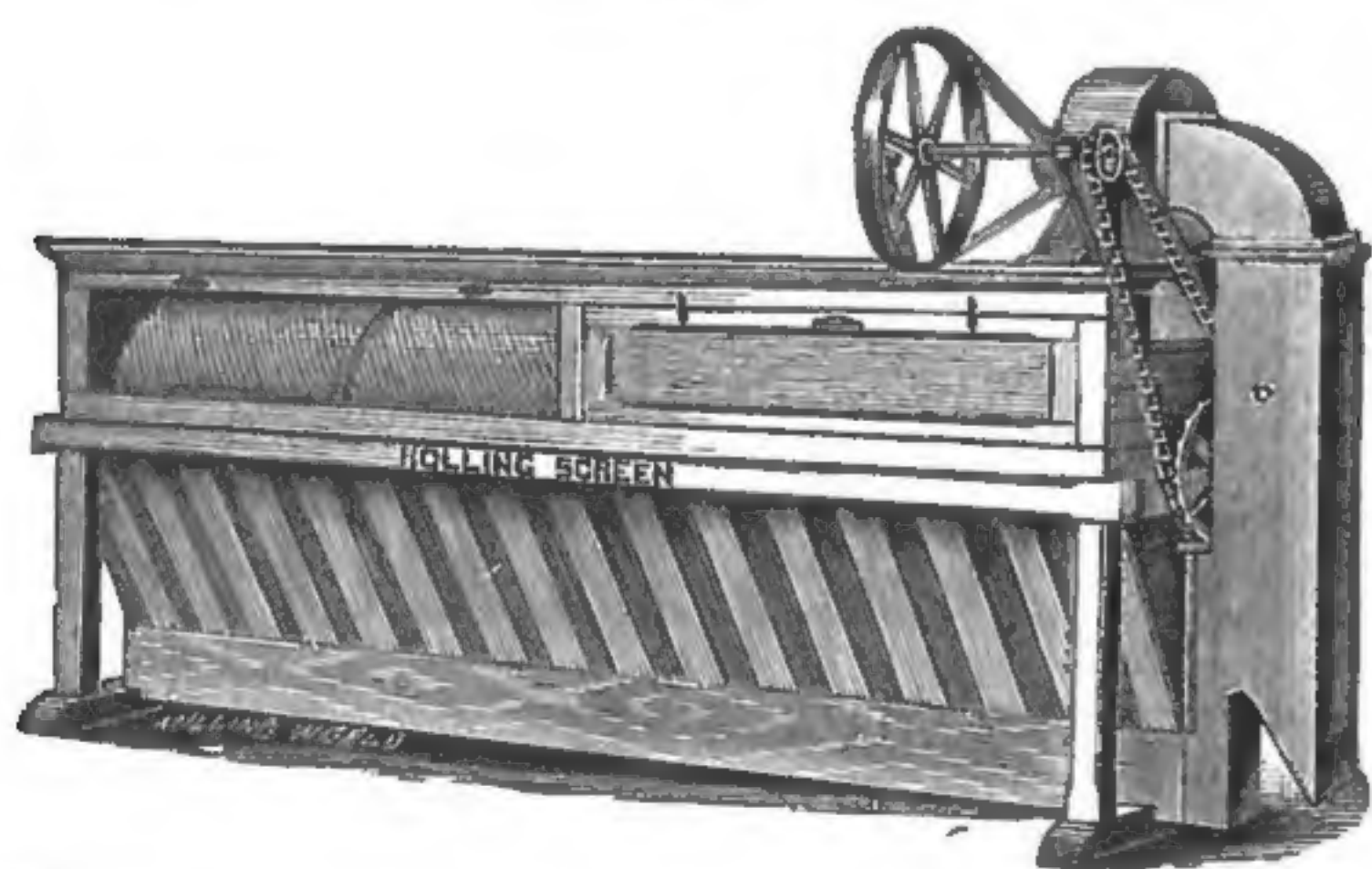
"The Rickerson." The original six inch 4 Roller Mill. We now own the patents on this mill and after greatly improving the mill manufacture them in four sizes:

6x12 inch.

6x18 inch.

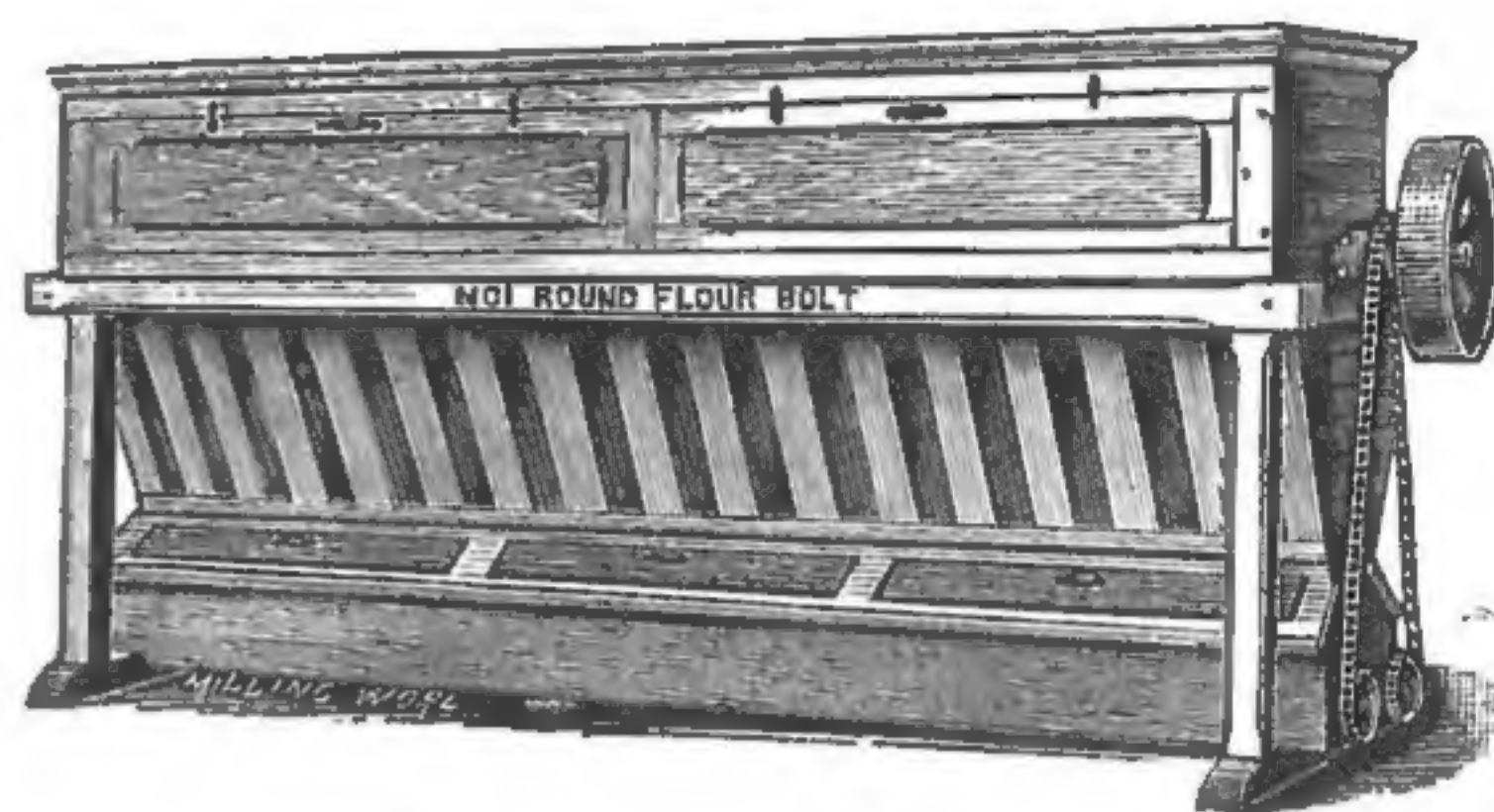
6x15 "

6x20 "

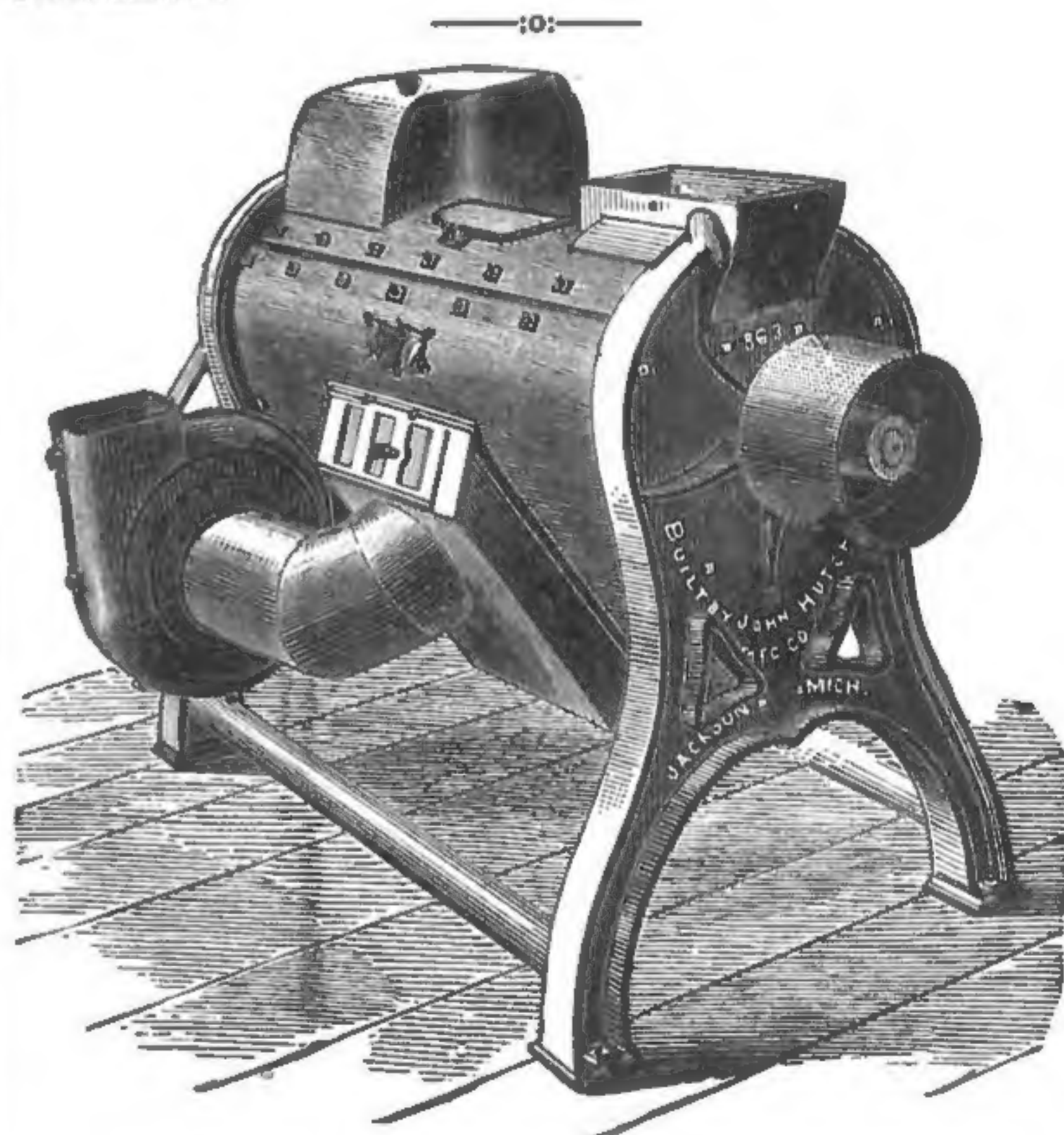


The above cut represents our New Rolling Screen, which is absolutely dustless and has as much scouring qualities as any two scouring machines now being made.

Send for Estimates for Our Full Roller Mills of any Capacity.



The above cut shows our New Round Slow Running Flour Bolt. We also build a Cylinder or Round Scalping Reel and we have lately built a number of new mills of medium capacity, using our Roller Mills, our Round Flour Bolts and Scalping Reels, getting better results than is usually obtained.



Hutchison's New Dustless Iron Corn Sheller, especially adapted for Mill and Elevator use.

ADDRESS ALL CORRESPONDENCE TO:—

John Hutchison Mfg. Co.

JACKSON. . . MICHIGAN.



ELEVATOR BUCKET.

CORRUGATIONS

What we know of corrugations can be found out by writing to US, or H. W. Caldwell, Chicago, Ill.

Stamping and Pressing of Sheet Metals for all Classes of Work. Also Tinning, Galvanizing and Japanning.

THE AVERY STAMPING CO.,

Successors to The Avery Elevator Bucket Co.,

Cleveland, Ohio, U. S. A.

H. W. Caldwell, 131 W. Washington Street, Chicago, Ill.,
General Agent.



CALDWELL'S PATENT.



SELF-TRAMMING PORTABLE MILL

BEST GRINDING MILL MADE.

BOLTING CLOTH

AND

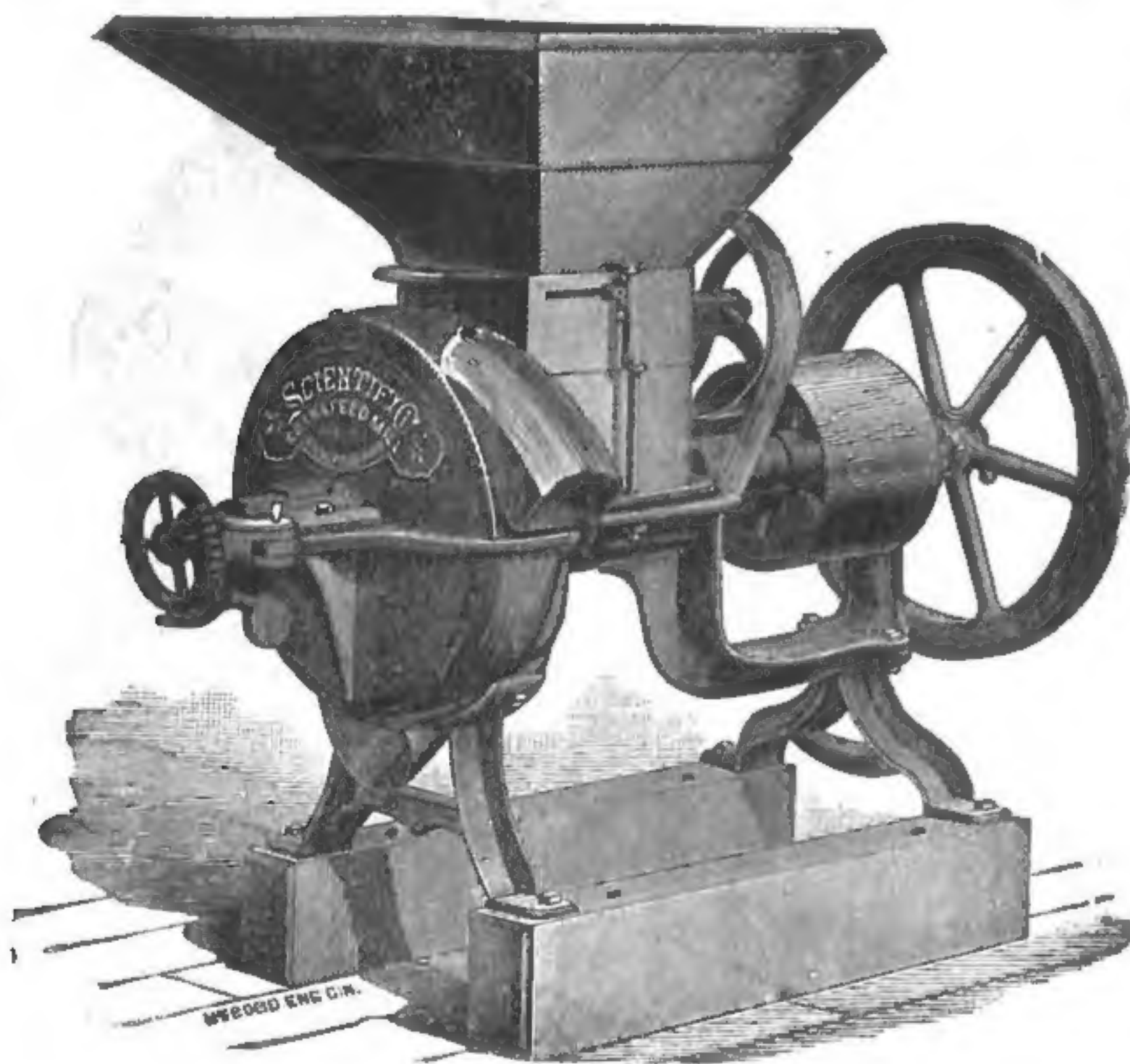
BURR AND ESOPUS MILLSTONES

WRITE FOR DISCOUNTS.

SAMUEL CAREY,

17 Broadway,

NEW YORK.



THE SCIENTIFIC GRINDING MILL.

POSITIVELY THE BEST MILL ON EARTH.

GRINDS PERFECTLY, EAR CORN, SHELLED CORN,
AND ALL GRAINS.

GRINDING PLATES A SPECIAL METAL

*Hard as Steel, Guaranteed to Grind from Five to Eight
Thousand Bushels before wearing out.*

SEND FOR ILLUSTRATED CATALOGUE, PRICES, ETC.

THE FOOS MFG. CO.

SPRINGFIELD OHIO.

STILL ON TOP.



Perhaps the HIGHEST COMPLIMENT that could be paid the "Salem" bucket is the fact that during the past few years ITS SHAPE HAS BEEN SO CLOSELY IMITATED by other manufacturers as to infringe our patented rights, but experience reveals the IMPERFECTIONS OF IMITATIONS, and we therefore take it as a FURTHER COMPLIMENT to the "SALEM" bucket that some of its old patrons who were Induced to Try the Imitations have now Returned to the Salem Bucket, thereby Acknowledging it to be the Most Satisfactory. Don't be deceived by other makes of buckets that are claimed to be "Just as Good." Insist upon having the ORIGINAL AND RELIABLE SALEM BUCKET. All legitimate Salem buckets are plainly marked with the word

SALEM

W. J. CLARK & CO., SOLE Manufacturers SALEM, OHIO.

THORNBURGH & GLESSNER, General Agents, CHICAGO, ILL.